Flood Stages and Discharges For Small Streams in Texas

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U.S. GEOLOGICAL SURVEY-WATER RESOURCES DIVISION

Texas District

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Prepared in cooperation with the Texas Highway Department and U.S. Department of Transportation, Federal Highway Administration

Research Study 4-5-65-85
Interim Report No. 85-4

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UNITED STATES

DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

FLOOD STAGES AND DISCHARGES FOR SMALL STREAMS IN TEXAS

ANNUAL PROGRESS REPORT

to

The Texas Highway Department and

U.S. Department of Transportation,

Federal Highway Administration

For the Period October 1, 1967, to September 30, 1968

Research Study No. 4-5-65-85, Interim Report No. 85-4

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U.S. Geological Survey

1971

Austin, Texas

C O N T E N T S

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(4) Numbers in parentheses identify Highway Districts in which the stations are located.

a/ Small watershed streamflow station in the U.S. Geological Survey network financed by funds from agencies other than the Texas Highway Department.

ILLUSTRATIONS

TABLES

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INTRODUCTION

Research Study No. 4-5-65-85, "Hydrologic Investigation of Small Drainage Areas in Texas," is a cooperative program between the Texas Highway Department and the Water Resources Division of the U.S. Geological Survey. This program, which began in September 1964, is financed by funds made available for research by the Texas Highway Department and the U.S. Department of Transportation, Federal Highway Administration.

This report is the fourth in a series of interim reports that describe the objectives, planning of the project, the instrumentation, the progress and status of the project, and the data collected during the year.

Program Objective

The objective of the program is to obtain basic hydrologic data that may be used to define the magnitude and frequency of floods for drainage areas of less than 20 square miles. When sufficient data have been obtained, a magnitude and frequency analysis of floods for streams of less than 20 square miles will be prepared. These data will supplement those used by Patterson (1963).

Program Planning

To accomplish the objective, a network of 151 partial-record crest-stage gages was established. These gages are distributed throughout the State to sample all hydrologic areas and flood-frequency regions as defined by Patterson (1963), and to obtain a representative sample of all physical characteristics. Information for peak discharges at miscellaneous sites is obtained as the need arises.

The present flood-frequency analysis (index-flood method) requires a minimum of 10 years of annual peak-discharge data to satisfy the requirements of statistical methods. About 10 years of peak-discharge data are required to sample the variations associated with a minor climatic cycle.

The planning of this program is also directed toward satisfying the objective by the use of methods other than the index-flood method. Five principal methods currently being studied by research groups for the purpose of developing a frequency-magnitude relation for drainage areas of less than 20 square miles are:

1. Index-flood method, Gumbel distribution.
2. Log-Pearson type III distribution.
3. Multiple-regression analysis.
4. Various mathematical models of the hydrologic processes that predict the response of the flood hydrographs to rainfall.
5. Probability distribution methods.

INSTRUMENTATION

Each site is equipped with one or more crest-stage gages and a stage-rainfall recorder. The crest-stage gage consists of two modified 2-inch pipe caps attached to an appropriate length of 2-inch pipe that encloses a wooden or metal rod. The upper cap contains a 1/4-inch vent hole to release trapped air and the lower cap has six 1/4-inch intake holes that allow water to enter. The intake holes in the lower vent cap are designed to give optimum performance with respect to "drawdown" and "stackup". The gage is mounted in a vertical position on the flood plain.

A small amount of granulated cork is placed inside the 2-inch pipe near the bottom of the inner rod. When a rise occurs, the water entering the pipe activates the cork inside the pipe. At the maximum stage, the cork adheres to the inner rod leaving a distinct "peak mark". This cork-line elevation on the inner rod is recorded in terms of the datum to which the gage was originally set. These recorded elevations are then verified by comparison with nearby floodmarks.

A typical installation consists of two crest-stage gages; one headwater gage, and one tailwater gage. The headwater gage is located upstream from the culvert at a distance approximately equal to one culvert width in order to record the true water-surface elevation upstream from any drawdown-zone disturbance. The tailwater gage is located downstream from the culvert to record the water-surface elevation at the culvert outlet. The differential head, determined from the difference in the recorded headwater and tailwater peaks, is then converted into a peak rate of flow by standard U.S. Geological Survey methods of computation (Bodhaine, 1968).

Additional hydrologic data are obtained at each site by a stage and rainfall recorder (S-R recorder). This recorder is a small compact instrument that records, on a circular chart, the time distribution, amount of rainfall, and the stage. The recorder chart marks one complete revolution each day. The instrument is ideally suited for recording a single storm between visits, but when more than one storm event occurs between visits, the record is superimposed. Although the S-R recorder has limitations, sufficient data can be obtained over a period of time to satisfy the needs for the rainfall-runoff analyses.

STATUS OF THE PROGRAM

The construction phase of the program was completed during the 1967 water year by the addition of 31 gages, making a total of 151 S-R recorders now installed throughout the State. The locations of these gages are shown on figure 1 (in pocket). All combinations of flood-frequency regions and hydrologic areas have been sampled with the exception of subregion 6-A, a low-lying coastal subregion near the Aransas Bay-Nueces Bay area. No suitable site could be found in that area. A complete list of gaging stations is contained in the section "Station Data".

Figure 1

Gaging stations on small streams in Texas, October 1, 1968.

(Map is in pocket on back cover of the report)

Stage-discharge ratings have been computed for 142 stations with the use of an electronic computer (Somers and Selner, 1965). These ratings define the stage-discharge relation from the lowest elevation controlled by the culvert to an elevation at which flow over the roadway begins. Above the roadway, the discharge is a combination of computer determined culvert flow, plus the measured or computed flow over the roadway.

The stage-discharge relation for the other nine gages, which are located at bridges, will be defined by current-meter measurements, or by indirect methods such as slope-area, contracted-opening, slope-conveyance, flow-over-roadway embankment, or other special studies.

One provision of the cooperative agreement is to obtain peak discharges for floods of unusual magnitude or for floods creating special problems at miscellaneous or ungaged sites. During the year, two miscellaneous measurements were obtained (table 2). Notable flood events that occurred during the water year are listed in table 1.

MARTIN STREET PUMP STATION

A depressed interchange on U.S. Highway 81 in San Antonio was selected as the site for a special study. A water-stage recorder equipped with a float-type rain-gage attachment was installed in the Martin Street pumping station on August 29, 1966. This operation is an experiment in obtaining rainfall-runoff data from a small controlled drainage area having a high percentage of impervious cover. Because this operation contains the minimum instrumentation, there is a possibility that some modification or additional equipment will be necessary. If this experiment is successful, the instrumentation will be moved to another site after sufficient data have been obtained at the Martin Street site.

Data from five storms that occurred during the 1968 water year are tabulated in table 3. The rainfall and runoff, in inches, for these five storms are plotted as mass curves on figures 2-6. Outflow and computed inflow hydrographs are plotted on figures 2-6. The computed inflow is considered the average rate of inflow during a time increment and is plotted as a bar graph. Inflow is computed from the algebraic sum of the change in contents of the wet well and the pumpage outflow during the selected time increment.

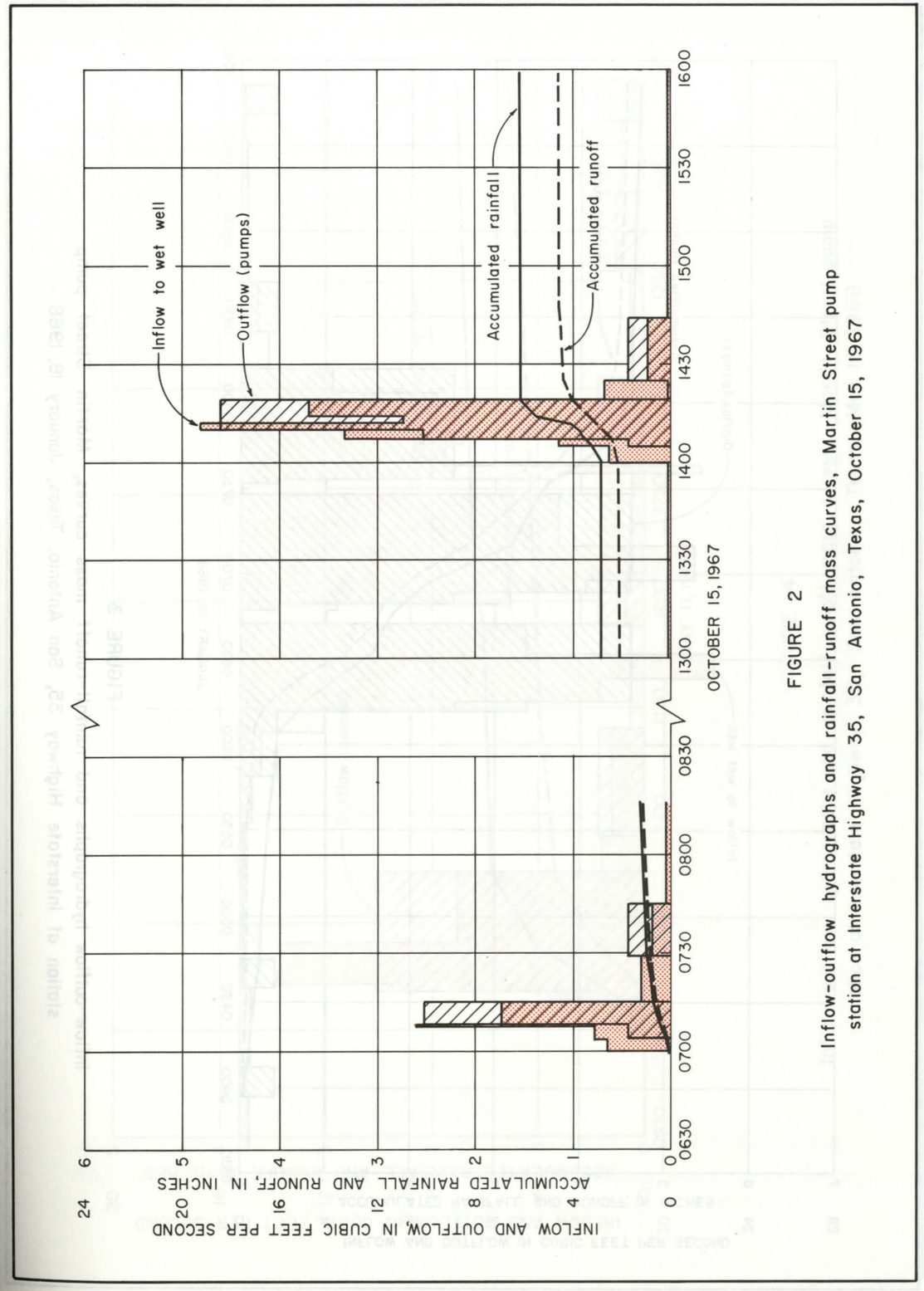

FIGURE 2

Inflow-outflow hydrographs and rainfall-runoff mass curves, Martin Street pump station at Interstate Highway 35, San Antonio, Texas, October 15, 1967

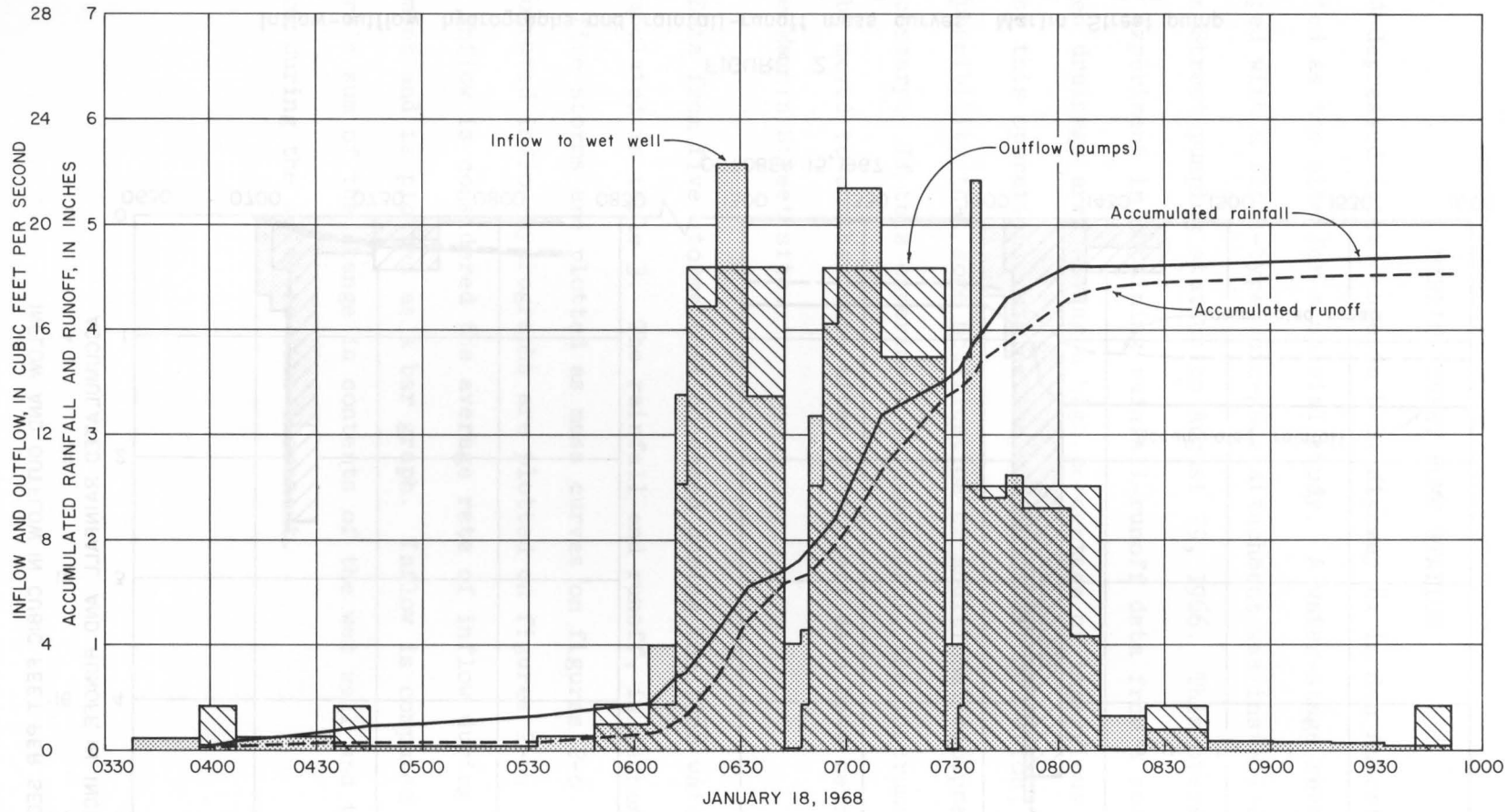

FIGURE 3

Inflow-outflow hydrographs and rainfall-runoff mass curves, Martin Street pump station at Interstate Highway 35, San Antonio, Texas, January 18, 1968

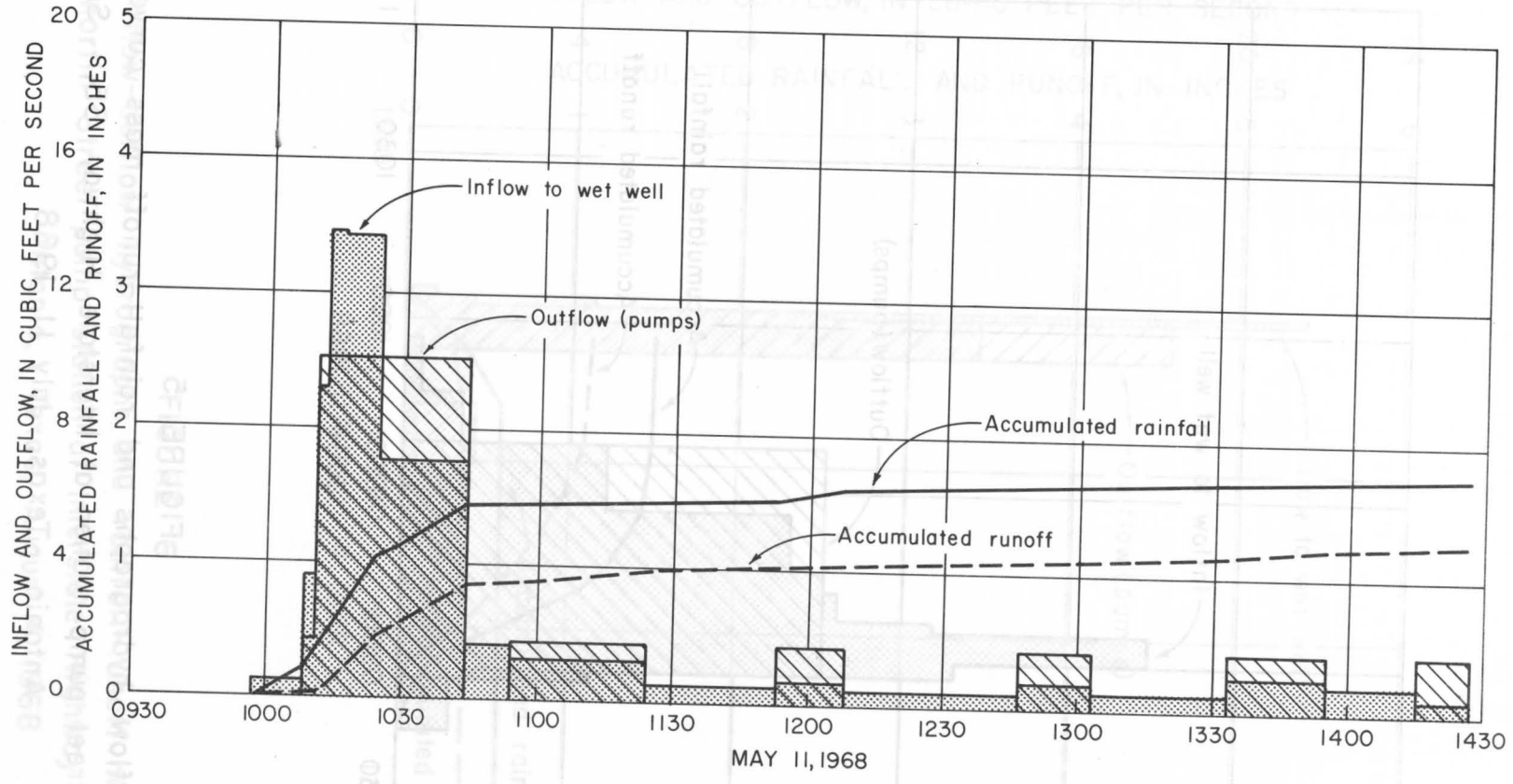

FIGURE 4

Inflow-outflow hydrographs and rainfall-runoff mass curves, Martin Street pump station at Interstate Highway 35, San Antonio, Texas, May 11, 1968

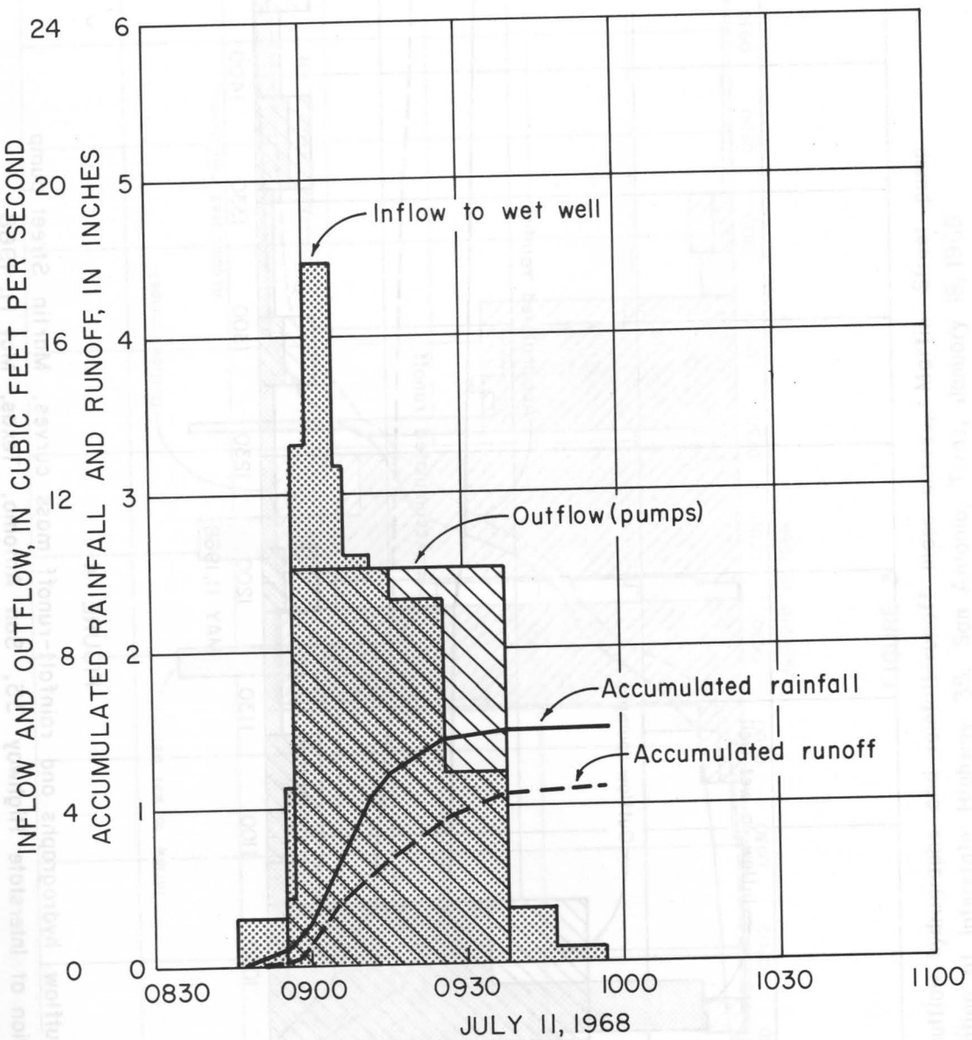

FIGURE 5

Inflow-outflow hydrographs and rainfall-runoff mass curves, Martin Street pump station at Interstate Highway 35, San Antonio, Texas, July 11, 1968

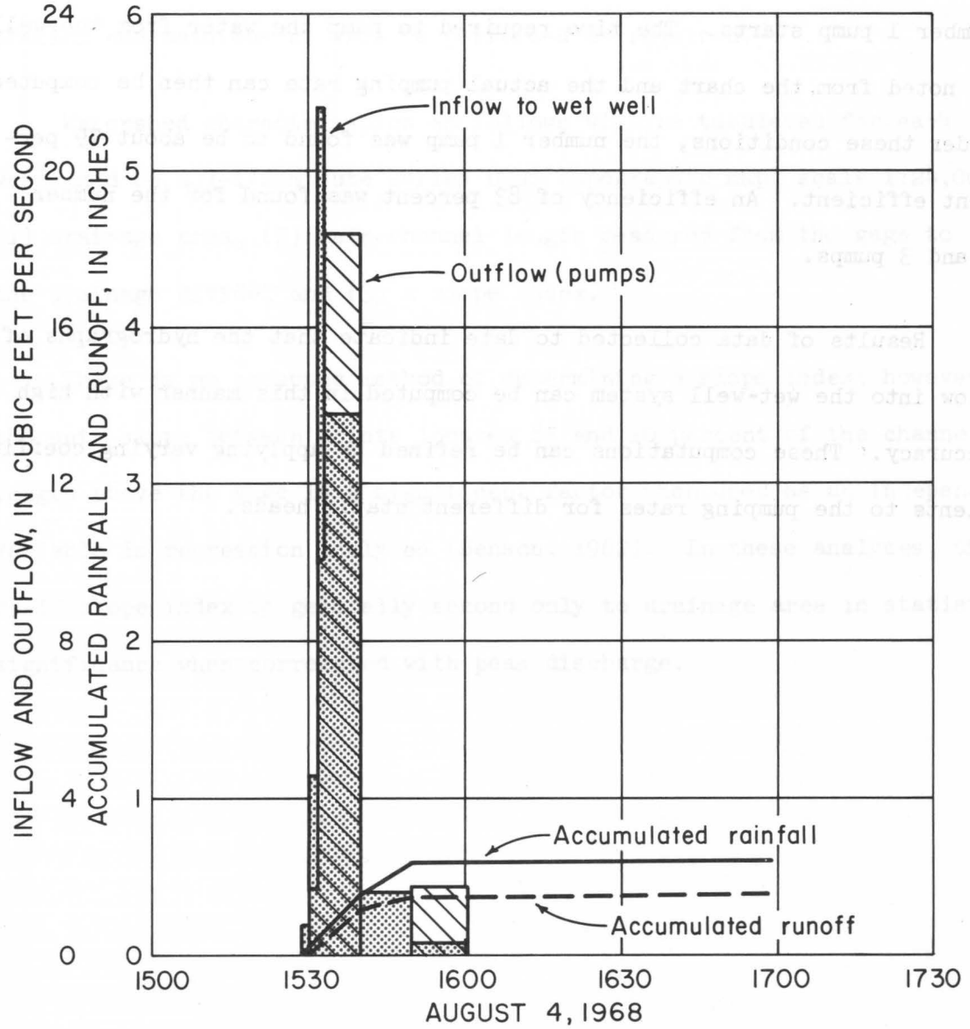

FIGURE 6

Inflow-outflow hydrographs and rainfall-runoff mass curves, Martin Street pump station at Interstate Highway 35, San Antonio, Texas, August 4, 1968

The efficiciency of the number 1 pump can be checked at times when the accumulation of seepage to the well reaches the elevation where the number 1 pump starts. The time required to pump the water from the well is noted from the chart and the actual pumping rate can then be computed. Under these conditions, the number 1 pump was found to be about 79 percent efficient. An efficiency of 83 percent was found for the number 2 and 3 pumps.

Results of data collected to date indicate that the hydrographs of flow into the wet-well system can be computed in this manner with high accuracy. These computations can be refined by applying varying coefficients to the pumping rates for different static heads.

PROGRAM FOR THE YEAR ENDING SEPTEMBER 30, 1969

Data from existing gages will be collected and tabulated. Stage-discharge curves will be defined and extended as the need arises. Operation and maintenance will be performed as required.

Watershed characteristics as follows will be tabulated for each watershed on a 7-1/2-minute series USGS topographic map, scale 1:24,000: (1) Drainage area, (2) main-channel length measured from the gage to the drainage divide, and (3) a slope index.

There is no accepted method of determining a slope index; however, the unit slope between points located 85 and 10 percent of the channel length above the gage is a significant factor when used as an independent variable in regression analyses (Benson, 1962). In these analyses, the 85-10 slope index is generally second only to drainage area in statistical significance when correlated with peak discharge.

DISCONTINUED STATIONS

Occasionally, after a station has been established and operated for a period of time, conditions develop that prove the site to be undesirable. When this occurs, the station is discontinued. A new site is then selected and the instrumentation is moved. The following is a list of stations that were discontinued during the 1968 water year.

Station No.	Station	Highway District	Date Discontinued
8-1148.0	Coon Creek tributary near Rosenberg, Tex.	(12)	Aug. 11, 1966
8-0659.0	Pollard Branch tributary near Madisonville, Tex.	(17)	Feb. 9, 1967
8-0697.5	McCombs Creek tributary near Oak Hurst, Tex.	(11)	Feb. 9, 1967
8-0710.5	Bee Branch near Fostoria, Tex.	(12)	Feb. 9, 1967
8-0681.5	Brushy Creek tributary near Hockley, Tex.	(12)	Feb. 10, 1967
8-1600.0	Dry Creek at Buescher Lake near Smithville, Tex.	(14)	Sept.30, 1967

HYDROLOGIC CONDITIONS

Annual runoff was generally in the median to deficient range during the year. Runoff at individual sites varied greatly. New peak discharges for the period of record wereexperienced at the streamflow stations McDonald Creek near Post and Deep Creek at Moran. New January peaks were experienced in the lower Atascosa, lower Frio, and lower Nueces watersheds.

The Concho River watershed experienced deficient runoff during most of the year. Flow occurred on only 19 days at the streamflow station North Concho River at Carlsbad.

Some degree of flooding occurred in 9 of the 12 months. This flooding varied in areal extent from relatively small local areas receiving intense summertime thunderstorms to a fairly large area along the Gulf Coast that received substantial rainfall from tropical storm Candy during June.

DATA COMPILATION

The "station data" section of this report lists the available annual-peak data for watersheds of less than 20 square miles. In addition to the 151 Highway Program stations, 66 other stations are included, thereby grouping all of the available continuous data for small watersheds into one volume. These 66 stations are identified in the table of contents by (a/).

All stations are listed in downstream order by station number, which appears to the left of the station name. The number appearing to the right of the station name identifies the Highway District in which the station is located. All stations are plotted on figure 1 and are identified by number. In addition, symbols are used to identify the type of station.

Although the state contractual year ends on August 31, the water year ending on September 30 will be used as the 12-month period of data collection so that reporting will be continuous with previously collected streamflow data.

Some notable floods that occurred during the period October 1, 1967, to September 30, 1968, are listed in table 1. This list includes only those floods associated with unusual amounts of rainfall or runoff or for which a special request regarding peak discharge was received. Additional details about some of the more destructive floods are contained in various reports prepared by the U.S. Geological Survey, Texas Water Development Board, U.S. Army Engineers, U.S. Weather Bureau, U.S. Department of Agriculture, and others.

The measurements of peak discharge at miscellaneous small-area sites obtained during the reporting period are contained in table 2. Additional information concerning these measurements may be obtained from the files of the U.S. Geological Survey District Office in Austin, Texas.

Table 3 gives the rainfall and inflow for significant storms at the Martin Street pump station, San Antonio, Texas.

Table 4 is a tabulation of runoff and point rainfall data collected at selected gaging stations. Data for the storm that produced the maximum annual rate of runoff and for other significant storms are listed.

DEFINITION OF TERMS

Some of the terms and abbreviations used in this report are defined as follows:

Gaging station.--A particular site on a stream where systematic observations of gage height or discharge are obtained.

Cubic foot per second (cfs).--the rate of discharge of a stream whose channel is one square foot in cross-sectional area and whose average velocity is one foot per second.

Gage height.--the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage" although gage height is more appropriate when used with a reading on a gage. When the gage is referred to mean sea level datum, the term "elevation" is commonly used instead of gage height.

Drainage area.--of a stream at a specified location is that area, measured in a horizontal plane, which is so enclosed by a topographic divide that direct surface runoff from precipitation normally would drain by gravity into the stream above the specified point. Drainage areas given herein include noncontributing areas unless otherwise noted.

Main-channel length.--the distance, in miles, of the main channel, extended to the watershed divide, as measured with a divider, set to a distance equal to 0.05 mile. Mile zero is at the gaging station.

Slope index.--equal to the difference in elevation between the 85 and 10 percent points, in feet, divided by the main-channel distance between these points, in miles, where these points are 10 and 85 percent of the distance along the main channel upstream from the station.

Time of day.--is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030 and 1:30 p.m. is 1330.

Water year.--A 12-month period ending on September 30, identified by the year in which it ends; thus, the 12-month period ending September 30, 1968, is identified as the 1968 water year.

SELECTED REFERENCES

Benson, M. A., 1962, Factors influencing the occurrence of floods in a humid region of diverse terrain: U.S. Geol. Survey Water-Supply Paper 1580-B, 64 p.

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Somers, W. P., and Selner, G. I., 1965, Computation of stage-discharge relationships at culverts: U.S. Geol. Survey surface-water techniques, Hydraulic measurement and computation, Book 1, Chapter 8.

Table 1.--Notable flood events during the 1968 water year.

Location	Date	Remarks
San Antonio, Bexar County	Jan. 18, 1968	Local flooding, 5 persons drowned.
Coastal Bend, south central, and southern Texas	May 7-13, 1968	Rainfall ranging up to 23.26 inches fell during the period, 2 persons drowned in Corpus Christi.
Presidio County	July 5, 1968	Flash flooding, 2 persons drowned.

Table 2.--Maximum discharge at miscellaneous sites.

Basin	Stream	Location	Drainage area (sq mi)	Date	Discharge (cfs)	cfs per sq mi
Red River	House Log Creek near Wellington, Texas.	Lat 34°50'56", long 100°13'50", at Farm Road 338, at Wellington, Collingsworth County.	4.06	July 15, 1968	9,700	2,390
Rio Grande	Cibolo Creek at Presidio, Texas.	Lat 29°34', long 104°23, 1 mile downstream from low-water crossing on Farm Road 170 and 1 mile northwest of Presidio, Presidio County.	277	July 6, 1968	7,790	28.1

Table 3.--Rainfall and inflow for significant storms at the Martin Street pump station, San Antonio, Tex.

Drainage area is 6.36 acres, 0.0099375 square mile.

Date and Time	Gage Height	Storage	Time int.	△ Storage	Outflow		Inflow		Runoff			Rainfall	
Oct. 15, 1967	ft	ft^3	min.	ft^3	ft^3/min.	ft^3	ft^3	ft^3/sec.	in/hr	inches	acc. inches	inches	in/hr
0700	12.05 631.55	1,537	-	-	-	-	-	-	-	-	-	0	-
0704	14.52 634.02	2,164	04	+627	0	0	627	2.61	0.407	0.027	0.027	.04	0.60
0708	15.85 635.35	2,502	04	+338	105	420	758	3.16	.493	.033	.060	.11	1.05
0708.5	15.90 635.40	2,515	.5	+13	605	302	315	10.50	1.638	.014	.074	.13	2.40
0715.5	10.72 630.22	1,199	07	-1,316	605	4,235	2,919	6.95	1.084	.126	.200	.20	.60
0729	14.52 634.02	2,164	13.5	+965	0	0	965	1.19	.186	.042	.242	.25	.22
0745	10.78 630.28	1,214	16	-950	105	1,680	730	.760	.119	.032	.274	.27	.08
0816	12.20 631.70	1,575	31	+361	0	0	361	.194	.030	.015	.289	.30	.06
0831	13.30 632.80	1,854	15	+279	0	0	279	.310	.048	.012	.301	.33	.12
0846	14.52 634.02	2,164	15	+310	0	0	310	.344	.054	.013	.314	.35	.08
0900	10.78 630.28	1,214	14	-950	105	1,470	520	.619	.097	.023	.337	.39	.17
0916	12.35 631.85	1,613	16	+399	0	0	399	.416	.065	.016	.353	.43	.15
0932	14.20 633.70	2,083	16	+470	0	0	470	.490	.076	.020	.373	.47	.15
0935	14.52 634.02	2,164	03	+81	0	0	81	.450	.070	.004	.377	.48	.20
0952	10.78 630.28	1,214	17	-950	105	1,785	835	.819	.128	.036	.413	.55	.25

Note.--Texas Highway Department Datum = Gage Height +619.50 ft.

Table 3.--Rainfall and inflow for significant storms at the Martin Street pump station, San Antonio, Tex. --Continued

Oct. 15, 1967 storm.--Continued

Drainage area is 6.36 acres, 0.0099375 square mile.

Date and Time	Gage Height	Storage	Time int.	△ Storage	Outflow		Inflow		Runoff			Rainfall	
Oct. 15, 1967	ft	ft^3	min.	ft^3	ft^3/min.	ft^3	ft^3	ft^3/sec.	in/hr	inches	acc. inches	inches	in/hr
1001	12.10 631.60	1,549	09	+335	0	0	335	0.620	0.097	0.015	0.428	0.57	0.18
1018	14.52 634.02	2,164	17	+615	0	0	615	.603	.094	.027	.455	.60	.11
1032	10.78 630.28	1,214	14	-950	105	1,470	520	.619	.097	.023	.478	.62	.08
1045	11.35 630.85	1,359	13	+145	0	0	145	.186	.029	.006	.484	.64	.09
1101	12.55 632.05	1,664	16	+305	0	0	305	.318	.050	.013	.497	.67	.11
1117	13.85 633.35	1,994	16	+330	0	0	330	.344	.054	.014	.511	.68	.04
1125	14.52 634.02	2,164	08	+170	0	0	170	.354	.055	.007	.518	.69	.08
1135	10.78 630.28	1,214	10	-950	105	1,050	100	.167	.026	.004	.522	.69	0
1200	11.02 630.52	1,275	25	+61	0	0	61	.041	.006	.002	.524	.71	.05
1300	11.34 630.84	1,356	60	+81	0	0	81	.022	.003	.003	.527	.71	0
1400	11.52 631.02	1,402	60	+46	0	0	46	.013	.002	.002	.529	.71	0
1405	14.52 634.02	2,164	05	+762	0	0	762	2.540	.396	.033	.562	.78	.84
1407	15.85 635.35	2,502	02	+338	105	210	548	4.567	.712	.024	.586	.83	1.50
1410	17.55 637.05	3,088	03	+586	605	1,815	2,401	13.34	2.081	.104	.690	.88	1.00
1412	17.77 637.27	3,187	02	+99	1,105	2,210	2,309	19.24	3.001	.100	.790	1.02	4.20

Note.--Texas Highway Department Datum = Gage Height +619.50 ft.

Table 3.--Rainfall and inflow for significant storms at the Martin Street pump station, San Antonio, Tex. --Continued

Oct. 15, 1967 storm.--Continued

Drainage area is 6.36 acres, 0.0099375 square mile.

Date and Time	Gage Height	Storage	Time int.	△ Storage	Outflow		Inflow		Runoff			Rainfall	
Oct. 15, 1967	ft	ft^3	min.	ft^3	ft^3/min.	ft^3	ft^3	ft^3/sec.	in/hr	inches	ace. inches	inches	in/hr
1414	15.00 634.50	2,286	02	-900	1,105	2,210	1,310	10.92	1.703	0.057	0.847	1.38	10.80
1419	10.72 630.22	1,199	05	-1,087	1,105	5,525	4,438	14.79	2.307	.192	1.039	1.53	1.80
1425	14.52 634.02	2,164	06	+965	0	0	965	2.68	.418	.042	1.081	1.53	0
1444	10.78 630.28	1,214	19	-950	105	1,995	1,045	.917	.143	.045	1.126	1.53	0
1500	11.40 630.90	1,372	16	+158	0	0	158	.165	.026	.007	1.133	1.53	0
1601	12.50 632.00	1,651	61	+279	0	0	279	.076	.012	.012	1.145	1.53	0
1801	13.28 632.78	1,849	120	+198	0	0	198	.028	.004	.008	1.153	1.53	0
2001	13.71 633.21	1,959	120	+110	0	0	110	.015	.002	.004	1.157	1.53	0

Note.--Texas Highway Department Datum = Gage Height +619.50 ft.

Table 3.--Rainfall and inflow for significant storms at the Martin Street pump station, San Antonio, Tex. --Continued

Drainage area is 6.36 acres, 0.0099375 square mile.

Date and Time	Gage Height	Storage	Time int.	△ Storage	Outflow		Inflow		Runoff			Rainfall	
Jan. 18, 1968	ft	ft^3	min.	ft^3	ft^3/min.	ft^3	ft^3	ft^3/sec.	in/hr	inches	ace. inches	inches	in/hr
0000	12.39 631.89	1,623	-	-	-	-	-	-	-	-	-	0	-
0338	12.43 631.93	1,634	218	+11	0	0	11	0.001	0	0	0	.01	-
0357	14.50 634.00	2,159	19	+525	0	0	525	.460	.072	.023	.023	.07	0.02
0407	10.77 630.27	1,212	10	-947	105	1,050	103	.172	.027	.004	.027	.09	.12
0435	14.50 634.00	2,159	28	+947	0	0	947	.563	.088	.041	.068	.18	.19
0445	10.77 630.27	1,212	10	-947	105	1,050	103	.172	.027	.004	.072	.22	.24
0501	11.50 631.00	1,397	16	+185	0	0	185	.193	.030	.008	.080	.25	.11
0532	12.70 632.20	1,702	31	+305	0	0	305	.164	.026	.013	.093	.31	.12
0548	14.51 634.01	2,161	16	+459	0	0	459	.478	.075	.020	.113	.38	.26
0604	11.62 631.12	1,427	16	-734	105	1,680	946	.985	.154	.041	.154	.43	.19
0612	15.85 635.35	2,502	08	+1,075	105	840	1,915	3.990	.622	.083	.237	.68	1.88
0615	17.64 637.14	3,120	03	+618	605	1,815	2,433	13.517	2.108	.105	.342	.72	.80
0623	15.40 634.90	2,388	08	-732	1,105	8,840	8,108	16.892	2.635	.351	.693	1.10	2.85
0632	20.42 639.42	4,498	09	+2,110	1,105	9,945	12,055	22.324	3.482	.522	1.215	1.55	3.00

Note.--Texas Highway Department Datum = Gage Height +619.50 ft.

Table 3.--Rainfall and inflow for significant storms at the Martin Street pump station, San Antonio, Tex. --Continued

Jan. 18, 1968 storm.--Continued

Drainage area is 6.36 acres, 0.0099375 square mile.

Date and Time	Gage Height	Storage	Time int.	△ Storage	Outflow		Inflow		Runoff			Rainfall	
Jan. 18, 1968	ft	ft^3	min.	ft^3	ft^3/min.	ft^3	ft^3	ft^3/sec.	in/hr	inches	ace. inches	inches	in/hr
0643	10.67 630.17	1,186	11	-3,312	1,105	12,155	8,843	13.398	2.090	0.383	1.598	1.70	0.82
0647	14.51 634.01	2,161	04	+975	0	0	975	4.062	.634	.042	1.640	1.80	1.50
0649	15.85 635.35	2,502	02	+341	105	210	551	4.592	.716	.024	1.664	1.90	3.00
0653	17.63 637.13	3,123	04	+621	605	2,420	3,041	12.671	1.976	.132	1.796	2.05	2.25
0657	16.24 635.74	2,601	04	-522	1,105	4,420	3,898	16.242	2.533	.169	1.965	2.20	2.25
0710	21.63 641.13	4,962	13	+2,361	1,105	14,365	16,726	21.443	3.344	.725	2.690	3.20	4.62
0728	10.68 630.18	1,188	18	-3,774	1,105	19,890	16,116	14.922	2.327	.698	3.388	3.50	1.00
0732	14.52 634.02	2,164	04	+976	0	0	976	4.067	.634	.042	3.430	3.62	1.80
0733	15.85 635.35	2,502	01	+338	105	105	443	7.383	1.152	.019	3.449	3.65	1.80
0735	17.55 637.05	3,087	02	+585	605	1,210	1,795	14.958	2.332	.078	3.527	3.85	6.00
0738	22.18 641.68	5,182	03	+2,095	605	1,815	3,910	21.722	3.387	.169	3.696	4.00	3.00
0745	21.68 641.18	4,982	07	-200	605	4,235	4,035	9.607	1.498	.175	3.871	4.30	2.57
0749	21.91 641.41	5,074	04	+92	605	2,420	2,512	10.467	1.632	.109	3.980	4.38	1.20
0803	20.00 639.50	4,310	14	-764	605	8,470	7,706	9.174	1.431	.334	4.314	4.60	.94
0812	10.66 630.16	1,183	09	-3,127	605	5,445	2,318	4.293	.669	.100	4.414	4.60	0

Note.--Texas Highway Department Datum = Gage Height +619.50 ft. Assuming that No. 3 pump did not operate at 0735 hrs.

Table 3.--Rainfall and inflow for significant storms at the Martin Street pump station, San Antonio, Tex. --Continued

Jan. 18, 1968 storm.--Continued

Drainage area is 6.36 acres, 0.0099375 square mile.

Date and Time	Gage Height	Storage	Time int.	△ Storage	Outflow		Inflow		Runoff			Rainfall	
Jan. 18, 1968	ft	ft^3	min.	ft^3	ft^3/min.	ft^3	ft^3	ft^3/sec.	in/hr	inches	ace. inches	inches	in/hr
0825	14.52 634.02	2,164	13	+981	0	0	981	1.258	0.196	0.042	4.456	4.61	0.04
0842	10.76 630.26	1,209	17	-955	105	1,785	830	.814	.127	.036	4.492	4.63	.07
0901	12.15 631.65	1,562	19	+353	0	0	353	.310	.048	.015	4.507	4.65	.06
0917	13.20 632.70	1,829	16	+267	0	0	267	.278	.043	.011	4.518	4.67	.08
0932	14.05 633.05	2,045	15	+216	0	0	216	.240	.037	.009	4.527	4.68	.04
0941	14.52 634.02	2,164	09	+119	0	0	119	.220	.034	.005	4.532	4.69	.07
0951	10.75 630.25	1,207	10	-957	105	1,050	93	.155	.024	.004	4.536	4.70	.06

Note.--Texas Highway Department Datum = Gage Height +619.50 ft.

Table 3.--Rainfall and inflow for significant storms at the Martin Street pump station, San Antonio, Tex. --Continued

Drainage area is 6.36 acres, 0.0099375 square mile.

Date and Time	Gage Height	Storage	Time int.	△ Storage	Outflow		Inflow		Runoff			Rainfall	
May 11, 1968	ft	ft^3	min.	ft^3	ft^3/min.	ft^3	ft^3	ft^3/sec.	in/hr	inches	ace. inches	inches	in/hr
0957	13.13 632.63	1,811	-	-	-	-	-	-	-	-	-	0	-
1008	14.52 634.02	2,164	11	+353	0	0	353	0.535	0.083	0.015	0.015	.20	1.09
1011	15.87 635.37	2,507	03	+343	105	315	658	3.656	.570	.028	.043	.36	3.20
1013	15.47 634.97	2,406	02	-101	605	1,210	1,109	9.242	.924	.031	.074	.47	3.30
1016	17.55 637.05	3,087	03	+681	605	1,815	2,496	13.867	2.163	.108	.182	.62	3.00
1024	21.37 640.87	4,858	08	+1,771	605	4,840	6,611	13.773	2.148	.286	.468	1.05	3.22
1044	10.70 630.20	1,194	20	-3,664	605	12,100	8,436	7.030	1.096	.365	.833	1.45	1.20
1054	14.52 634.02	2,164	10	+970	0	0	970	1.617	.252	.042	.875	1.47	.12
1124	10.70 630.20	1,194	30	-970	105	3,150	2,180	1.211	.189	.094	.969	1.52	.10
1153	14.52 634.02	2,164	29	+970	0	0	970	.557	.087	.042	1.011	1.57	.10
1208	10.77 630.27	1,212	15	-952	105	1,575	623	.692	.108	.027	1.038	1.60	.12
1247	14.52 634.02	2,164	39	+952	0	0	952	.407	.063	.041	1.079	1.64	.06
1303	10.72 630.22	1,199	16	-965	105	1,680	715	.745	.116	.031	1.110	1.66	.08
1333	14.52 634.02	2,164	30	+965	0	0	965	.536	.084	.042	1.152	1.70	.08
1355	10.77 630.27	1,212	22	-952	105	2,310	1,358	1.029	.160	.059	1.211	1.72	.05

Note.--Texas Highway Department Datum = Gage Height +619.50 ft. Assuming that No. 3 pump did not operate at 1016 hrs.

Table 3.--Rainfall and inflow for significant storms at the Martin Street pump station, San Antonio, Tex. --Continued

May 11, 1968 storm.--Continued

Drainage area is 6.36 acres, 0.0099375 square mile.

Date and Time	Gage Height	Storage	Time int.	△ Storage	Outflow		Inflow		Runoff			Rainfall	
May 11, 1968	ft	ft^3	min.	ft^3	ft^3/min.	ft^3	ft^3	ft^3/sec.	in/hr	inches	ace. inches	inches	in/hr
1415	14.52 634.02	2,164	20	+952	0	0	952	0.793	0.124	0.041	1.252	1.74	0.06
1427	10.77 630.27	1,212	12	-952	105	1,260	308	.428	.067	.013	1.265	1.75	.05

Note.--Texas Highway Department Datum = Gage Height +619.50 ft.

Table 3.--Rainfall and inflow for significant storms at the Martin Street pump station, San Antonio, Tex. --Continued

Drainage area is 6.36 acres, 0.0099375 square mile.

Date and Time	Gage Height	Storage	Time int.	△ Storage	Outflow		Inflow		Runoff			Rainfall	
July 11, 1968	ft	ft^3	min.	ft^3	ft^3/min.	ft^3	ft^3	ft^3/sec.	in/hr	inches	acc. inches	inches	in/hr
0846	11.90 631.40	1,499	-	-	-	-	-	-	-	-	-	0	-
0855	14.52 634.02	2,164	09	+665	0	0	665	1.231	0.192	0.024	0.024	.11	0.73
0857	15.85 635.35	2,502	02	+338	105	210	548	4.567	.712	.024	.048	.18	2.10
0900	17.55 637.05	3,077	03	+575	605	1,815	2,390	13.278	2.071	.104	.152	.28	2.00
0905	22.00 641.50	5,110	05	+2,033	605	3,025	5,058	16.860	2.630	.219	.371	.63	4.20
0906	22.40 641.90	5,270	01	+160	605	605	765	12.750	1.989	.033	.404	.68	3.00
0912	22.71 642.21	5,394	06	+124	605	3,630	3,754	10.428	1.626	.163	.567	1.08	4.00
0916	22.71 642.21	5,394	04	0	605	2,420	2,420	10.083	1.573	.105	.672	1.23	2.25
0926	21.60 641.10	4,950	10	-444	605	6,050	5,606	9.343	1.457	.243	.915	1.43	1.20
0938	10.68 630.18	1,188	12	-3,762	605	7,260	3,498	4.858	.758	.152	1.067	1.49	.30
0947	13.55 633.05	1,918	09	+730	0	0	730	1.352	.211	.032	1.099	1.49	0
0957	14.52 634.02	2,164	10	+246	0	0	246	.410	.064	.011	1.110	1.49	0

Note.--Texas Highway Department Datum = Gage Height +621.50 ft. Assuming that No. 3 pump did not operate at 0900 hrs.

Table 3.--Rainfall and inflow for significant storms at the Martin Street pump station, San Antonio, Tex. --Continued

Drainage area is 6.36 acres, 0.0099375 square mile.

Date and Time	Gage Height	Storage	Time int.	△ Storage	Outflow		Inflow		Runoff			Rainfall	
Aug. 4, 1968	ft	ft^3	min.	ft^3	ft^3/min.	ft^3	ft^3	ft^3/sec.	in/hr	inches	acc. inches	inches	in/hr
1529	14.33 633.83	2,116	-	-	-	-	-	-	-	-	-	0	-
1530	14.52 634.02	2,164	01	+48	0	0	48	0.800	0.125	0.002	0.002	.04	2.40
1532	15.82 635.35	2,502	02	+338	105	210	548	4.567	.712	.024	.026	.11	2.10
1533	17.65 637.15	3,123	01	+621	605	605	1,226	21.667	3.379	.056	.082	.15	2.40
1540	10.70 630.20	1,194	07	-1,929	1,105	7,735	5,806	13.824	2.156	.252	.334	.40	2.14
1550	14.52 634.02	2,164	10	+970	0	0	970	1.617	.252	.042	.376	.60	1.20
1601	10.78 630.28	1,217	11	-947	105	1,155	208	.315	.049	.009	.385	.60	0
1700	10.93 630.43	1,253	59	+36	0	0	36	.010	.002	.002	.387	.60	0
1800	10.99 630.45	1,268	60	+15	0	0	15	.004	.001	.001	.388	.60	0

Note.--Texas Highway Department Datum = Gage Height +619.50 ft.

Table 4.--Incremental rainfall and discharge for significant storms.

7-2981.5 Rock Creek tributary near Silverton, Tex. (25)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 8, 1968	1800	0	-
	1830	.25	-
	2200	.30	2.5
	2215	.55	3.5
	2230	.90	6.4
	2245	.95	8.0
	2300	1.10	9.0
	2315	1.15	10.5
	2400	1.20	6.4
May 9	0030	1.20	6.0
	0100	1.20	5.9
	0200	1.20	5.8
	0300	1.20	5.2
	0400	1.20	4.2
	0500	1.20	3.5
	0530	1.20	2.7
	0600	1.20	2.5

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

7-2999.4 Oklahoma Draw tributary near Hedley, Tex. (25)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 8, 1968	1545	0	-
	1600	.35	-
	1615	.65	-
	1630	.90	-
	1645	1.10	90
	1700	1.25	152
	1715	1.25	162
	1730	1.25	100
	1745	1.25	90
	1800	1.25	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

7-3077.2 Cottonwood Creek tributary near Afton, Tex. (25)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 9, 1968	0030	0	-
	0050	0	210
	0100	0	320
	0110	.25	510
	0120	1.25	660
	0130	1.85	445
	0145	2.00	265
	0200	2.00	210
	0300	2.00	-
Aug. 28	1700	0	-
	1710	0	-
	1715	.20	-
	1720	.65	-
	1725	.85	-
	1800	.85	160
	1830	1.00	178
	1845	1.00	210
	1900	1.00	240
	1915	1.00	270
	1930	1.00	220
	1945	1.00	200
	2000	1.00	178
	2015	1.00	160
	2100	1.00	-

7-3121.4 Beaver Creek tributary near Crowell, Tex. (25)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Jan. 22, 1968	0500	0	-
	0600	.20	-
	0700	.40	-
	0900	.80	-
	1100	1.00	-
	1400	1.00	-
	1430	1.00	44.5
	1530	1.00	61.0
	1600	1.00	84.0
	1700	1.00	105
	1730	1.00	113
	1800	1.00	113
	1830	1.00	105
	1900	1.00	99.0
	2000	1.00	95.0
	2100	1.00	82.0
	2200	1.00	71.0
	2300	1.00	66.5
	2400	1.00	56.0
Jan. 23	0030	1.00	52.0
	0100	1.00	44.5
	0130	1.00	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

7-3142 North Fork Little Wichita River tributary near Archer City, Tex. (03)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
July 7, 1968	0545	0	-
	0600	.10	-
	0615	.25	-
	0630	.40	-
	0645	.90	-
	0700	1.65	-
	0715	2.40	21
	0730	3.05	60
	0745	3.10	128
	0800	3.15	152
	0815	3.20	60
	0830	3.20	39
	0900	3.20	26
	0915	3.20	23
	0930	3.22	21
	1000	3.25	-
	1030	3.28	-
	1100	3.30	-
	1130	3.33	-
	1200	3.35	-
	1230	3.38	-
	1300	3.40	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

7-3155.5 Farmers Creek near Saint Jo, Tex. (03)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 11, 1968	2030	0	30
	2045	0	34
	2100	.35	85
	2115	.75	79
	2130	1.00	62
	2145	1.15	50
	2200	1.16	36
	2215	1.17	34
	2230	1.18	33
	2245	1.20	32
	2300	1.20	30
	2315	1.20	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

7-3424.5 Nelson Branch near Leonard, Tex. (01)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Oct. 30, 1967	0600	0	0
	0630	0	-
	0700	.08	-
	0800	.20	-
	0900	.22	-
	1000	.70	-
	1100	1.10	-
	1130	1.20	12
	1200	1.40	15
	1230	1.60	18
	1300	1.80	26
	1330	2.00	37
	1400	2.08	44
	1430	2.18	49
	1500	2.30	30
	1530	2.30	26
	1600	2.30	24
	1630	2.30	24
	1700	2.30	20
	1730	2.30	18
	1800	2.30	15
	1830	2.30	12
	1900	2.30	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

7-3433.5 Dial Branch near Bagwell, Tex. (01)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
June 12, 1968	1900	0	-
	1915	.05	-
	1920	.17	12
	1930	.40	17
	1940	.80	22
	2000	.80	49
	2020	.80	79
	2040	.80	63
	2100	.80	49
	2130	.80	35
	2200	.80	28
	2300	.80	22
	2400	.80	22
June 13	0100	.80	17
	0130	.80	12
	0200	.80	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

7-3444.9 Dragoo Creek near Mount Pleasant, Tex. (19)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Mar. 10, 1968	2200	0	-
	2300	.03	-
	2400	.20	-
Mar. 11	0100	.47	-
	0200	.60	-
	0300	.60	-
	0400	.60	-
	0500	.75	-
	0600	.83	-
	0630	.87	120
	0700	.95	125
	0730	1.00	140
	0800	1.03	157
	0830	1.09	215
	0900	1.15	320
	0930	1.15	620
	1000	1.20	920
	1030	1.25	1,020
	1100	1.33	970
	1130	1.40	800
	1200	1.55	500
	1230	1.55	390
	1300	1.60	288
	1400	1.73	185
	1430	1.79	172
	1500	1.85	150
	1600	1.95	127
	1700	2.05	124
	1800	2.05	122
	1900	2.10	120
	2000	2.15	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

7-3444.9 Dragoo Creek near Mount Pleasant, Tex. (19)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
June 3, 1968	2400	0	-
	0045	0	-
	0100	.25	-
	0200	.42	-
	0300	.60	120
	0330	.68	125
	0400	.75	127
	0430	.80	128
	0500	.85	130
	0515	.85	135
	0530	.88	130
	0545	.90	130
	0600	.94	128
	0630	.94	127
	0700	1.00	125
	0730	1.00	122
	0800	1.00	120
	0830	1.00	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0177 Burnett Branch near Canton, Tex. (10)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Dec. 20, 1967	2300	0	-
	2400	0	-
	0030	0	6
	0100	.10	9
	0200	.30	13
	0230	.43	17
	0300	.63	21
	0330	.90	31
	0400	1.05	55
	0420	1.10	61
	0430	1.15	68
	0440	1.15	61
	0500	1.25	55
	0530	1.32	43
	0600	1.35	37
	0630	1.35	31
	0700	1.38	21
	0800	1.42	17
	0900	1.45	13
	1000	1.48	9
	1030	1.48	6
	1100	1.48	-
May 3, 1968	0400	0	-
	0430	0	9
	0500	.30	17
	0510	.95	59
	0520	1.12	61
	0530	1.15	68
	0540	1.21	61
	0550	1.25	43
	0600	1.27	26
	0620	1.27	17
	0640	1.27	13
	0700	1.27	9
	0730	1.27	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0208 Grace Creek tributary at Longview, Tex. (10)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Apr. 1, 1968	1430	0	-
	1500	.05	-
	1600	.10	-
	1700	.10	-
	1800	.15	-
	1900	.45	-
	1930	.70	72
	2000	.80	166
	2030	.88	166
	2100	1.10	166
	2130	1.40	187
	2200	1.75	280
	2215	1.80	360
	2230	1.85	420
	2245	1.95	385
	2300	2.08	385
	2330	2.18	360
	2400	2.27	360
Apr. 2	0100	2.50	360
	0200	2.55	330
	0300	2.68	330
	0400	2.70	280
	0500	2.88	200
	0600	3.00	187
	0700	3.05	146
	0800	3.05	146
	0900	3.20	127
	1000	3.20	127
	1100	3.20	109
	1200	3.20	109
	1300	3.20	109
	1400	3.20	109
	1500	3.20	90
	1600	3.20	90
	1630	3.20	72
	1700	3.20	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0208 Grace Creek tributary at Longview, Tex. (10)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 9, 1968	1500	0	-
	1520	.40	72
	1540	.56	90
	1600	1.15	109
	1620	1.55	200
	1640	1.55	685
	1700	1.55	650
	1730	1.55	385
	1800	1.55	257
	1830	1.55	166
	1900	1.55	109
	1930	1.55	72
	2000	1.55	-
July 1	1100	0	-
	1130	.20	-
	1200	.50	72
	1230	.70	109
	1300	.70	146
	1315	.70	187
	1330	.70	166
	1345	.70	146
	1400	.70	127
	1430	.70	109
	1500	.70	90
	1600	.70	90
	1645	.70	72
	1700	.70	-
	1730	.70	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0220.1 Redmon Branch near Hallsville, Tex. (19)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Feb. 1, 1968	1100	0	-
	1130	.13	2
	1200	.20	11
	1300	.35	21
	1330	.45	24
	1400	.55	30
	1410	.60	34
	1500	.71	24
	1600	.80	13
	1700	.93	9
	1800	.95	7
	1900	.95	5
	2000	.95	4
	2200	.95	4
	2400	.95	3
Feb. 2	0100	.95	3
	0200	.95	2
	0300	.95	-
Apr. 1	1400	0	-
	1500	.13	-
	1600	.15	-
	1700	.18	-
	1800	.22	-
	1900	.58	-
	2000	.60	-
	2100	.98	-
	2200	1.16	5
	2300	1.35	13
	2400	1.65	16
Apr. 2	0100	1.90	16
	0120	1.98	37
	0140	2.03	68
	0150	2.05	76
	0200	2.10	72
	0215	2.15	60
	0245	2.22	37
	0300	2.28	30
	0400	2.28	16
	0500	2.35	11
	0700	2.50	5

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0220.1 Redmon Branch near Hallsville, Tex. (19)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Apr. 2, 1968-Con.	0900	2.60	4
	1300	2.60	3
	1700	2.60	2
	2100	2.60	2
	2200	2.60	1
	2300	2.60	1
	2400	2.60	-
Apr. 3	0100	2.60	-
May 17	0600	0	-
	0700	.14	-
	0800	.41	-
	0840	.46	-
	0900	.46	2
	1000	.46	9
	1100	.56	13
	1200	.76	44
	1220	.76	48
	1240	.80	40
	1300	.81	37
	1400	.98	24
	1500	1.21	30
	1600	1.38	34
	1700	1.41	34
	1800	1.41	24
	1900	1.41	18
	2000	1.41	11
	2200	1.41	9
	2400	1.41	7
May 18	0200	1.41	3
	0400	1.41	2
	0500	1.41	1
	0600	1.41	-
	0700	1.41	-
June 6	2200	0	-
	2230	.25	1
	2300	.90	5
	2350	.98	24
	2400	.98	27

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0220.1 Redmon Branch near Hallsville, Tex. (19)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
June 7, 1968	0020	0.98	24
	0040	.98	18
	0100	1.10	13
	0110	1.25	13
	0130	1.60	18
	0200	1.60	30
	0215	1.60	34
	0245	1.60	30
	0300	1.60	27
	0400	1.60	16
	0500	1.60	9
	0600	1.60	5
	0800	1.60	5
	1000	1.60	4
	1200	1.60	3
	1300	1.60	2
	1400	1.60	1
	1500	1.60	-
Aug. 7	0700	0	-
	0800	.68	-
	0810	.70	-
	0830	.95	1
	0900	1.88	5
	0920	2.04	7
	0940	2.08	13
	1000	2.14	16
	1005	2.14	18
	1010	2.15	16
	1030	2.18	11
	1100	2.18	9
	1200	2.18	4
	1300	2.18	3
	1400	2.18	2
	1500	2.18	2
	1600	2.18	1
	1700	2.18	-
	1800	2.18	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0321 Hurricane Creek tributary near Palestine, Tex. (10)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Apr. 1, 1968	2130	0	-
	2200	.65	-
Apr. 2	0230	.65	-
	0300	.75	-
	0500	.85	-
	0600	1.30	(6)
	0615	1.50	12
	0630	1.75	29
	0645	1.85	24
	0700	2.15	21
	0715	2.25	24
	0730	2.25	18
	0745	2.25	12
	0800	2.25	10
	0900	2.25	(5)
	1000	2.25	(2)
	1200	2.25	(1)
May 10	1615	0	(0)
	1630	.40	10
	1645	1.00	24
	1700	1.00	30
	1715	1.02	27
	1730	1.03	18
	1800	1.05	10
	1900	1.15	(5)
	2100	1.20	(2)
	2400	1.20	(1)
May 11	0300	0	-
	0400	.15	(0)
	0500	.40	(2)
	0600	.50	(6)
	0630	.95	12
	0700	1.25	24
	0730	1.60	32
	0800	1.80	25
	0830	1.95	18
	0900	2.00	14
	0930	2.00	10
	1000	2.00	(7)
	1200	2.00	(4)
	1400	2.00	(2)
	1600	2.00	(1)

( ) Water below intakes; discharge estimated.

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0322.5 One Arm Creek near Maydelle, Tex. (10)

Date	Time	*Accumulated rainfall (inches)	Discharge (cfs)
July 2, 1968	1500	0	-
	1600	1.12	-
	1645	1.68	90
	1700	1.86	280
	1730	1.94	600
	1745	1.98	670
	1800	2.02	630
	1830	2.03	440
	1900	2.04	260
	1930	2.04	185
	2000	2.04	140
	2030	2.04	103
	2100	2.04	90
	2200	2.04	68

* Rainfall based on total at Dialville 2W, using new Summerfield 2W for distribution.

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0332.5 Piney Creek tributary near Pennington, Tex. (11)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Jan. 9, 1968	0000	0	-
	0100	.2	-
	0200	.5	-
	0230	.8	46
	0300	1.1	80
	0400	1.5	128
	0500	1.55	128
	0600	1.55	100
	0700	1.6	62
	0730	1.6	46
	0800	1.65	-
	1200	1.75	-
	1800	1.80	-
	2400	1.95	-
Mar. 22	0130	0	-
	0200	1.05	46
	0215	1.25	62
	0230	1.27	74
	0300	1.30	86
	0400	1.30	100
	0600	1.30	80
	0700	1.30	57
	0800	1.30	(40)
	1000	1.30	(25)
	1200	1.30	(15)
	1500	1.30	(10)
	1800	1.30	(5)
	2400	1.30	(2)

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0332.5 Piney Creek tributary near Pennington, Tex. (11)--Continued

Date	Time	*Accumulated rainfall (inches)	Discharge (cfs)
Apr. 8, 1968	1200	0	-
	1300	.20	-
	1400	.21	-
	1500	.51	-
	1600	1.61	-
	1630	1.94	46
	1700	2.28	120
	1730	2.40	190
	1800	2.53	252
	1900	2.77	265
	2000	2.89	260
	2030	2.96	208
	2100	3.03	158
	2130	3.07	142
	2200	3.11	128
	2230	3.13	113
	2300	3.15	80
	2330	3.23	62
	2400	3.31	51

* Rainfall computed from Nogalus Guard Station and Groveton using Lovelady for distribution.
( ) Discharge estimated.

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0373 Gingham Branch near Mount Enterprise, Tex. (10)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Sept. 6, 1968	1100	0	-
	1200	.25	-
	1300	.25	-
	1330	.35	-
	1345	.50	22
	1400	1.80	26
	1420	(*)	30
	1440	(*)	35
	1500	(*)	27
	1530	(*)	22
	1600	(*)	(15)
	1700	(*)	(10)
	1800	(*)	(5)
Sept. 13	2300	0	-
	2400	.25	-
Sept. 14	0100	.65	-
	0200	1.00	-
	0330	2.05	-
	0500	2.10	-
	0600	2.25	-
	0830	2.35	-
	0900	2.80	22
	0930	3.90	50
	1000	3.95	35
	1030	4.00	22
	1100	4.00	(10)
	1200	4.00	(5)
	1400	4.00	(2)

* Rain gage stopped working.
( ) Water below intakes; discharge estimated.

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0425.5 West Fork Double Bayou near Anahuac, Tex. (20)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Apr. 8, 1968	2100	0	-
	2200	1.70	31
	2300	2.35	57
	2400	3.15	108
Apr. 9	0100	3.30	160
	0300	3.60	208
	0600	4.45	256
	1000	4.90	290
	1400	4.90	300
	1800	4.90	290
	2400	4.90	218
Apr. 10	0600	4.90	156
	1200	4.90	115
	1800	4.90	93
	2400	4.90	77
Apr. 11	0600	4.90	65
	1200	4.90	52
	2400	4.90	31

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0442 Walker Creek near Boyd, Tex. (02)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Mar. 19, 1968	0440	0	-
	0520	.35	-
	0540	.40	108
	0600	.48	220
	0620	.50	295
	0640	.50	360
	0700	.50	500
	0720	.55	560
	0730	.55	580
	0740	.60	540
	0800	.70	485
	0840	.70	340
	0900	.75	340
	0930	.80	485
	0950	.80	500
	1000	.80	500
	1030	.80	430
	1100	.80	280
	1130	.80	207
	1200	.80	141
	1230	.80	108
	1300	.80	-
Apr. 18	2200	0	-
	2300	.18	-
	2400	.28	-
Apr. 19	0100	.35	-
	0200	.40	-
	0300	.46	-
	0400	.50	-
	0500	.60	-
	0600	.72	-
	0700	.78	-
	0800	.80	-
	0900	.80	-
	1000	.84	169
	1015	.86	380
	1030	.88	520
	1040	.88	560
	1045	.90	520

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0442 Walker Creek near Boyd, Tex. (02)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Apr. 19, 1968-Con.	1100	0.90	485
	1115	.90	410
	1130	.90	395
	1145	.90	485
	1200	.90	560
	1215	.92	560
	1230	.92	485
	1300	1.00	340
	1400	1.18	194
	1415	1.20	169
	1500	1.30	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0531 Jones Valley Creek tributary near Forestburg, Tex. (03)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Mar. 19, 1968	0430	0	-
	0445	.10	-
	0500	.15	-
	0515	.20	-
	0530	.25	35
	0545	.35	42
	0600	.40	51
	0615	.45	59
	0630	.50	73
	0645	.60	75
	0700	.65	88
	0715	.75	115
	0730	.85	105
	0745	.90	99
	0800	.95	103
	0815	1.00	105
	0830	1.00	120
	0845	1.00	122
	0900	1.05	122
	0930	1.05	94
	1000	1.05	65
	1030	1.05	49
	1130	1.05	39
	1200	1.05	35
	1300	1.05	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0592 Arls Branch near Westminister, Tex. (18)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Apr. 19, 1968	0400	0	-
	0430	.05	23
	0500	.15	86
	0510	.20	295
	0520	.35	180
	0530	.85	107
	0540	.90	73
	0550	.97	50
	0600	1.17	40
	0700	1.35	27
	0800	1.35	23
	0830	1.35	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0628.5 Bachelor Creek near Terrell, Tex. (18)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Oct. 29, 1967	1800	0	-
	1900	.20	-
	2100	.40	-
	2145	.50	-
	2200	1.05	14
	2300	2.55	147
	2400	3.22	500
Oct. 30	0100	3.40	590
	0200	3.62	650
	0300	3.90	720
	0400	4.25	760
	0600	4.35	800
	0700	4.35	890
	0800	4.35	890
	0900	4.35	845
	1100	4.35	845
	1300	4.35	720
	1500	4.35	590
	1700	4.35	530
	1900	4.35	373
	2100	4.35	300
	2300	4.35	215
Oct. 31	0100	4.35	147
	0400	4.35	110
	0700	4.35	110
	1000	4.35	97
	1300	4.35	77
	1700	4.35	62
	2100	4.35	58
Nov. 1	0100	4.35	54
	0500	4.35	43
	0900	4.35	36
	1300	4.35	26
	1400	4.35	20
	1800	4.35	17
	1900	4.35	14
	2000	4.35	-
	2100	4.35	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0630.05 Red Oak Branch near Eustace, Tex. (10)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 9, 1968	1900	0	-
	1930	0	13
	2000	.35	24
	2030	.70	74
	2100	.75	180
	2115	.95	230
	2130	1.35	480
	2145	1.60	610
	2200	1.65	700
	2215	1.65	700
	2230	1.70	540
	2245	1.70	480
	2300	1.70	360
	2330	1.70	285
	2400	1.70	255
May 10	0100	1.70	245
	0130	1.70	239
	0200	1.70	209
	0300	1.70	153
	0400	1.70	108
	0500	1.70	85
	0600	1.70	74
	0700	1.70	59
	0800	1.70	40
	0900	1.70	28
	1000	1.70	24
	1100	1.70	24
	1200	1.70	20
	1300	1.70	17
	1330	1.70	13
	1400	1.70	13

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0631.8 Briar Creek tributary near Corsicana, Tex. (18)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Oct. 15, 1967	1600	0	-
	1700	.15	-
	1800	.40	-
	1810	.45	-
	1900	1.35	97
	1920	1.55	125
	1940	1.60	155
	2000	1.60	184
	2100	1.65	200
	2200	2.30	200
	2210	2.45	215
	2220	2.50	283
	2230	2.50	300
	2240	2.50	320
	2250	2.50	353
	2300	2.50	340
	2330	2.50	231
	2400	2.50	215
Oct. 16	0100	2.50	169
	0200	2.50	125
	0300	2.50	112
	0400	2.50	83
	0500	2.50	68
	0600	2.50	55
	0700	2.50	43
	0800	2.50	22
	0900	2.50	13
	1000	2.50	-
	1030	2.50	-
	1100	2.50	-
May 10, 1968	1730	0	-
	1740	.25	32
	1800	.40	112
	1820	.40	125
	1840	.45	112
	1900	.55	112
	2000	.80	112
	2100	.90	112
	2120	1.25	155

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0631.8 Briar Creek tributary near Corsicana, Tex. (18)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 10, 1968-Con.	2140	1.40	200
	2200	1.40	184
	2230	1.50	169
	2300	2.22	340
	2315	2.60	456
	2330	2.75	540
	2345	2.75	660
	2400	2.75	456
May 11	0010	2.75	417
	0020	2.75	267
	0040	2.75	200
	0100	2.75	169
	0200	2.75	125
	0300	2.75	112
	0400	2.75	112
	0500	2.75	112
	0600	2.75	97
	0700	2.75	83
	0800	2.75	83
	0900	2.75	83
	1000	2.75	68
	1100	2.75	55
	1200	2.75	43
	1300	2.75	43
	1400	2.75	32
	1500	2.75	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0635.5 Alvarado Branch near Alvarado, Tex. (02)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Oct. 20, 1967	1030	0	-
	1045	.10	-
	1100	.60	55
	1130	1.75	235
	1150	1.85	393
	1200	1.95	359
	1215	1.95	295
	1230	1.95	205
	1245	2.00	167
	1300	2.05	118
	1400	2.10	74
	1430	2.10	55
	1500	2.10	-
Sept. 24, 1968	0900	0	-
	0930	0	-
	0945	.20	-
	1000	.65	-
	1015	1.30	-
	1030	1.90	55
	1045	2.35	167
	1100	2.65	359
	1115	2.65	393
	1130	2.65	340
	1145	2.65	265
	1200	2.65	194
	1215	2.65	130
	1230	2.65	95
	1245	2.65	84
	1300	2.65	74
	1315	2.65	55
	1330	2.65	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0636.2 Kings Branch near Reagor Springs, Tex. (18)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Jan. 18, 1968	2030	0	-
	2045	.10	-
	2100	.30	-
	2115	.80	-
	2130	1.20	-
	2145	1.40	-
	2200	1.40	-
	2215	1.40	40
	2230	1.40	62
	2245	1.40	89
	2300	1.40	95
	2330	1.40	95
	2400	1.40	113
Jan. 19	0015	1.40	119
	0030	1.40	113
	0045	1.40	107
	0100	1.40	100
	0130	1.40	89
	0200	1.40	89
	0230	1.40	89
	0300	1.40	89
	0330	1.40	83
	0400	1.40	72
	0500	1.40	58
	0600	1.40	48
	0700	1.40	40
	0800	1.40	-
Mar. 19	0800	0	-
	0830	.15	-
	0900	.15	-
	0930	.22	-
	1000	.55	-
	1030	.60	95
	1100	.80	146
	1130	.80	139
	1200	.80	132
	1230	.80	119
	1300	.80	113
	1330	.80	100

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0636.2 Kings Branch near Reagor Springs, Tex. (18)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Mar. 19, 1968-Con.	1400	0.80	95
	1430	.80	-
May 13	1600	0	-
	1630	0	-
	1700	0	-
	1800	0	-
	1930	0	-
	2000	.10	-
	2100	.40	113
	2115	.40	168
	2130	.50	190
	2145	.95	198
	2200	1.40	215
	2215	1.40	232
	2230	1.40	268
	2245	1.40	232
	2300	1.40	206
	2330	1.40	168
	2400	1.40	146
May 14	0030	1.40	132
	0100	1.40	125
	0130	1.40	119
	0200	1.40	113
	0230	1.40	-
July 22	0200	0	-
	0230	0	-
	0300	.15	-
	0330	.32	-
	0400	.60	-
	0430	.82	-
	0500	1.07	-
	0530	1.75	-
	0600	2.55	100
	0615	2.60	168
	0630	2.65	240
	0645	2.70	268
	0700	2.70	250
	0715	2.70	215

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0636.2 Kings Branch near Reagor Springs, Tex. (18)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
July 22, 1968-Con.	0730	2.70	183
	0745	2.70	168
	0800	2.70	153
	0830	2.70	132
	0900	2.70	119
	0930	2.70	113
	1000	2.70	113
	1030	2.70	107
	1100	2.70	100
	1130	2.70	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0646.3 Saline Branch tributary near Bethel, Tex. (10)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Mar. 10, 1968	2100	0	-
	2200	.25	-
Mar. 11	0200	.25	-
	0230	.40	-
	0330	.40	-
	0345	.95	-
	0400	1.00	22
	0430	1.15	29
	0500	1.60	32
	0520	1.85	46
	0540	1.95	60
	0600	2.25	49
	0630	2.35	42
	0700	2.55	34
	0800	2.65	29
	0900	2.65	27
	1000	2.65	24
	1100	2.65	22
Sept. 15	1230	0	-
	1300	.85	-
	1315	1.45	-
	1330	1.45	22
	1400	1.45	32
	1430	1.45	35
	1500	1.45	32
	1530	1.45	29
	1600	1.45	27
	1630	1.45	24
	1700	1.45	22

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0662.8 Bluff Creek tributary near Livingston, Tex. (11)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 12, 1968	0500	0	-
	0800	.15	-
	0830	.50	36
	0900	1.10	65
	0930	1.35	80
	1000	1.35	92
	1015	1.35	97
	1030	1.35	92
	1100	1.35	73
	1200	1.35	44
	1400	1.35	20
	1600	1.35	8
	1800	1.35	7
	2000	1.35	6

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0677.5 Landrum Creek tributary near Montgomery, Tex. (12)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 10, 1968	0600	0	-
	0630	.35	-
	0730	.50	-
	0745	.70	-
	0800	1.60	14
	0815	1.60	92
	0830	1.90	54
	0840	1.90	32
	0850	1.90	27
	0900	1.90	20
	0915	1.90	14

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0775.5 Cowart Creek near Friendswood, Tex. (12)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Apr. 8, 1968	2300	0	-
	2315	.15	-
	2400	.15	-
Apr. 9	0030	.25	-
	0100	1.50	-
	0200	2.60	163
	0230	2.80	268
	0300	2.80	400
	0330	2.80	472
	0400	2.80	496
	0430	3.10	508
	0500	3.20	522
	0600	3.30	536
	0700	3.45	536
	0800	3.60	550
	0900	3.70	578
	1000	3.80	592
	1200	3.80	623
	1400	3.80	606
	1600	3.80	578
	1800	3.80	550
	2100	3.80	484
	2400	3.80	412
Apr. 10	0400	3.80	324
	0800	3.80	260
	1200	3.80	216
	1800	3.80	169
June 21	0200	1.23	169
	0230	1.46	620
	0300	1.69	872
	0400	2.38	1,150
	0500	2.60	1,230
	0600	2.83	
	0700	2.90	1,280
	1000	3.19	1,260
	1200	3.27	1,240
	1500	3.27	1,150
	1800	3.27	974
	2400	3.27	792

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0775.5 Cowart Creek near Friendswood, Tex. (12)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
June 22, 1968	0600	3.27	592
	1100	4.76	508
	1200	6.07	718
	1330	6.19	920
	1500	6.19	888
	1800	6.19	704
	2400	6.19	496
June 23	0600	6.19	370
	1000	6.19	
	1100	6.55	
	1200	6.60	292
	1745	6.75	
	1800	7.39	
	1830	7.48	268
	1900	7.56	324
	1930	8.43	
	2000	8.47	550
	2100	8.65	662
	2115	8.69	
	2200	8.69	676
	2400	8.69	648
June 24	0100	8.69	690
	0215	9.72	
	0300	9.82	840
	0330	9.89	
	0415	10.75	
	0500	10.80	1,080
	0800	10.93	1,100
	1200	11.18	920
	1800	11.18	792
	2400	11.18	676
June 25	0600	11.18	564
	1200	11.18	448
	1800	11.18	316

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0795.7 Barnum Springs Draw near Post, Tex. (05)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 31, 1968	2030	0	-
	2045	0	11.5
	2100	0	82.0
	2115	0	244
	2130	0	435
	2145	.05	244
	2200	1.35	161
	2215	1.40	147
	2230	1.65	140
	2245	1.75	122
	2300	1.80	103
	2330	1.80	82.0
	2400	1.80	65.0
June 1	0030	1.80	55.0
	0100	1.80	45.0
	0130	1.80	36.0
	0200	1.80	32.0
	0230	1.80	30.2
	0300	1.80	25.0
	0400	1.80	20.1
	0500	1.80	18.6
	0600	1.80	17.2
	0700	1.80	14.8
	0800	1.80	12.6
	0900	1.80	11.5
	1000	1.80	-
June 8	0400	0	-
	0430	.20	11.5
	0500	.40	13.6
	0600	.40	32.0
	0620	.65	40.0
	0635	.75	55.0
	0640	1.25	60.0
	0655	1.35	182
	0710	1.35	168
	0730	1.35	220
	0745	1.35	119
	0800	1.35	65.0
	0900	1.35	18.6
	1000	1.35	11.5
	1100	1.35	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0795.8 Rattlesnake Creek near Post, Tex. (05)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
June 8, 1968	0600	0	-
	0615	.10	-
	0630	.20	-
	0645	.80	-
	0700	1.05	36
	0715	1.10	85
	0730	1.15	106
	0745	1.15	79
	0800	1.15	47
	0815	1.15	39
	0830	1.15	36
	0900	1.15	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0807.5 Callahan Draw near Lockney, Tex. (05)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
July 8, 1968	1200	0	-
	1215	.10	-
	1230	.30	-
	1245	.65	-
	1300	.80	-
	1315	1.05	-
	1330	1.25	-
	1345	1.70	-
	1400	1.75	-
	1430	1.77	-
	1500	1.80	-
	1515	1.85	-
	1600	1.85	3.3
	1630	1.85	9.2
	1700	1.85	11.3
	1730	1.85	23.0
	1800	1.85	37.5
	1830	1.85	48.0
	1900	1.85	53.5
	1930	1.85	58.5
	2000	1.85	66.0
	2030	1.85	75.0
	2100	1.85	58.5
	2200	1.85	48.0
	2300	1.85	27.5
	2400	1.85	27.5
July 9	0100	1.85	23.0
	0200	1.85	19.0
	0300	1.85	13.7
	0400	1.85	6.6
	0500	1.85	5.6
	0530	1.85	3.6
	0600	1.85	3.3

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0809.18 Red Mud Creek near Spur, Tex. (25)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
June 16, 1968	1845	0	-
	1900	.12	-
	1915	.17	-
	2000	.19	-
	2030	.25	28
	2045	.40	66
	2100	.73	225
	2115	1.18	420
	2130	1.87	760
	2145	2.10	1,150
	2155	2.18	3,500
	2215	2.23	1,990
	2230	2.23	1,500
	2245	2.24	1,120
	2300	2.26	920
	2315	2.28	800
	2400	2.40	510
June 17	0100	2.40	330
	0200	2.40	260
	0300	2.40	185
	0500	2.40	96
	0800	2.40	52
	0930	2.40	28
July 19	2015	0	-
	2030	.05	-
	2045	.25	-
	2050	.50	-
	2055	1.10	-
	2100	1.50	-
	2105	2.20	-
	2110	2.45	-
	2115	2.55	-
	2130	2.75	-
	2145	3.05	-
	2200	3.10	-
July 20	0000	3.10	-
	0200	3.10	28
	0215	3.10	130
	0230	3.10	455

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0809.18 Red Mud Creek near Spur, Tex. (25)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
July 20, 1968-Con.	0245	3.10	650
	0300	3.10	705
	0315	3.10	690
	0400	3.10	590
	0500	3.10	420
	0700	3.10	165
	1100	3.10	28

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0853 Humphries Draw near Haskell, Tex. (08)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 10, 1968	0700	0	-
	0715	.10	-
	0730	.50	-
	0745	.75	-
	0800	.90	-
	0845	1.00	-
	0900	1.00	0.9
	0915	1.00	16.0
	0930	1.00	200
	0945	1.00	520
	1000	1.00	620
	1015	1.00	690
	1030	1.00	730
	1045	1.00	740
	1100	1.00	770
	1130	1.00	790
	1200	1.00	790
	1230	1.00	790
	1300	1.00	820
	1330	1.00	840
	1400	1.00	880
	1430	1.00	920
	1500	1.00	920
	1600	1.00	920
	1630	1.00	920
	1700	1.00	920
	1730	1.00	910
	1800	1.00	910
	1830	1.00	895
	1900	1.00	880
	1930	1.00	850
	2000	1.00	805
	2030	1.00	755
	2100	1.00	710
	2115	1.12	670
	2130	1.20	600
	2145	1.30	580
	2200	1.45	540
	2230	1.80	485
	2300	1.90	380

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0853 Humphries Draw near Haskell, Tex. (08)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 10, 1968-Con.	2330	1.95	200
	2400	2.00	100
May 11	0030	2.00	35
	0100	2.00	28
	0130	2.00	28
	0200	2.00	28
	0230	2.00	35
	0300	2.00	50
	0330	2.00	200
	0400	2.00	340
	0430	2.00	340
	0500	2.00	200
	0530	2.00	100
	0600	2.00	100
	0700	2.00	100
	0730	2.00	100
	0800	2.00	100
	0830	2.00	50
	0900	2.00	28
	1000	2.00	16
	1100	2.00	7.4
	1200	2.00	2.0
	1300	2.00	1.6
	1330	2.00	1.2
	1400	2.00	.9
	1500	2.00	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0891 Elm Creek tributary near Graford, Tex. (02)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Mar. 20, 1968	0200	0	-
	0240	0	-
	0300	.25	-
	0400	.35	-
	0430	.40	4.00
	0440	.45	4.90
	0500	.60	6.90
	0515	.70	8.90
	0530	.85	13.3
	0545	.90	15.5
	0600	.95	16.2
	0630	1.05	13.3
	0700	1.15	11.3
	0730	1.25	10.6
	0800	1.25	8.90
	0830	1.25	7.40
	0900	1.25	6.40
	0930	1.25	5.40
	1000	1.25	4.90
	1100	1.25	4.00
	1200	1.25	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0912 Morris Branch near Bluff Dale, Tex. (02)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 3, 1968	1730	0	-
	1800	.20	-
	1900	.87	-
	1930	.87	9
	1945	.87	15
	2000	.87	22
	2015	.87	13
	2030	.87	9
	2045	.87	-
May 9	1700	0	-
	1715	0	-
	1730	.47	-
	1745	.77	9
	1800	.77	17
	1805	.77	28
	1815	.77	20
	1830	.77	13
	1845	.77	9
	1900	.77	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0917 Panter Branch near Tolar, Tex. (02)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Mar. 20, 1968	0100	0	-
	0300	.25	-
	0500	.45	-
	0700	.70	-
	0800	.80	47
	0900	.95	300
	1000	1.05	920
	1030	1.12	1,240
	1100	1.15	1,050
	1200	1.20	615
	1300	1.30	370
	1400	1.40	220
	1500	1.45	164
	1700	1.50	114
	1900	1.60	114
	2100	1.65	114
	2400	1.65	114
Mar. 21	0200	1.65	99
	0500	1.65	85
	0800	1.65	71
	1100	1.65	59
	1300	1.65	47
	1400	1.65	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0932 Bond Branch near Hillsboro, Tex. (09)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Oct. 30, 1967	0800	0	-
	0830	.35	-
	0900	.60	-
	0930	1.10	-
	1000	1.55	-
	1030	2.25	10
	1100	2.65	34
	1120	2.85	65
	1130	2.85	102
	1200	2.85	65
	1230	2.90	34
	1300	3.00	28
	1330	3.05	23
	1400	3.05	18
	1500	3.05	10
	1600	3.05	-
May 9, 1968	1900	0	-
	1930	.15	-
	1945	1.15	-
	2000	1.15	-
	2015	1.30	34
	2030	1.55	308
	2045	2.15	235
	2100	2.75	215
	2115	2.95	340
	2130	3.10	505
	2145	3.10	410
	2200	3.15	255
	2215	3.15	160
	2230	3.15	135
	2245	3.15	102
	2300	3.20	79
	2315	3.20	65
	2330	3.20	58
	2345	3.25	52
	2400	3.30	46
May 10	0015	3.30	40
	0030	3.35	34
	0045	3.35	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-0932 Bond Branch near Hillsboro, Tex. (09)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
June 3, 1968	1730	0	-
	1800	.28	-
	1830	.65	34
	1845	.75	86
	1900	.80	151
	1915	.80	118
	1930	.80	94
	1945	.80	72
	2000	.80	52
	2015	.80	46
	2030	.80	40
	2045	.80	34
	2100	.80	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-1008 Hoffman Branch near Hamilton, Tex. (09)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 17, 1968	0725	0	-
	0730	.3	-
	0735	.7	-
	0740	.9	1
	0745	.9	2
	0750	1.0	3
	0800	1.0	25
	0805	1.1	45
	0815	1.1	45
	0830	1.1	34
	0845	1.1	25
	0900	1.1	18
	0930	1.1	13
	1000	1.1	9
	1030	1.1	7
	1100	1.1	5
	1130	1.1	3
	1200	1.1	2
	1300	1.1	1

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-1111 Winkleman Creek near Brenham, Tex. (17)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 10, 1968	1300	0	-
	1500	.6	-
	1600	.8	-
	1630	1.9	-
	1645	2.4	70
	1700	2.5	150
	1710	2.5	220
	1715	2.6	295
	1720	2.6	410
	1725	2.6	480
	1735	2.6	370
	1745	2.6	220
	1800	2.6	150
	1900	2.6	100
	1930	2.6	84
	2000	2.6	62

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-1509 Stone Creek tributary near Art, Tex. (14)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 11, 1968	2010	0	-
	2020	.3	-
	2030	.8	<50
	2040	1.2	<50
	2050	1.7	50
	2100	1.8	82
	2110	1.8	78
	2120	1.8	58
	2130	1.8	<50
	2140	1.8	<50
	2150	1.8	<50
	2200	1.9	<50
	2210	1.9	-

< Less than amount shown.

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-1527 Little Flatrock Creek near Marble Falls, Tex. (14)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Jan. 21, 1968	0530	0	-
	0600	.2	-
	0630	.8	-
	0645	1.4	-
	0700	1.6	-
	0705	1.7	96
	0710	1.8	209
	0715	1.8	316
	0725	1.8	497
	0735	1.9	660
	0745	2.0	695
	0800	2.0	660
	0815	2.1	560
	0830	2.1	432
	0845	2.2	344
	0900	2.2	260
	0930	2.4	209
	1000	2.4	160
	1030	2.4	116
	1100	2.4	96
	1130	2.4	-
July 8	1850	0	-
	1900	.1	-
	1910	.9	-
	1920	1.0	-
	1930	1.1	80
	1935	1.1	96
	1940	1.1	136
	1945	1.1	288
	1950	1.1	373
	1955	1.1	400
	2000	1.1	400
	2020	1.2	315
	2025	1.2	400
	2030	1.2	432
	2035	1.2	432
	2045	1.2	400
	2100	1.2	343
	2130	1.2	235
	2200	1.3	160
	2230	1.3	116
	2300	1.3	80

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-1531 Cane Branch at Stonewall, Tex. (14)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Jan. 20, 1968	2100	0	-
	2200	.1	-
	2300	.5	-
	2400	.7	37
Jan. 21	0015	.7	42
	0030	.8	57
	0045	.9	62
	0100	.9	65
	0115	.9	68
	0130	1.0	74
	0230	1.0	74
	0245	1.0	68
	0300	1.0	62
	0315	1.1	62
	0330	1.1	52
	0345	1.2	49
	0400	1.2	42
	0415	1.3	42
	0430	1.3	37
	0445	1.4	-
	0530	1.5	37
	0545	1.5	42
	0600	1.5	52
	0615	1.5	57
	0700	1.6	57
	0715	1.6	52
	0800	1.7	42
	0815	1.7	37
	0830	1.7	-
July 13	0300	0	-
	0330	.5	-
	0345	1.0	-
	0400	1.3	-
	0405	1.4	57
	0410	1.4	107
	0415	1.5	107
	0425	1.6	92
	0430	1.6	80
	0440	1.6	67

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-1531 Cane Branch at Stonewall, Tex. (14)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
July 13, 1968-Con.	0450	1.6	80
	0500	1.6	92
	0515	1.6	128
	0530	1.6	135
	0545	1.6	128
	0600	1.6	112
	0630	1.6	74
	0700	1.6	52
	0715	1.6	42
	0730	1.6	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-1615.8 Dry Branch tributary near Altair, Tex. (13)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Oct. 14, 1967	1100	0	-
	1200	.20	-
	1230	.65	2
	1300	.75	6
	1400	1.00	10
	1500	1.25	17
	1800	1.25	32
	1830	2.00	41
	1900	2.00	52
	2000	2.00	90
	2130	2.05	105
	2230	3.10	113
	2330	3.55	120
Oct. 15	0030	3.55	138
	0200	3.55	105
	0400	3.55	90
	0600	3.55	63
	1200	3.55	41
	1800	3.55	10
	2400	3.55	5

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-1663 Turtle Creek tributary near Kerrville, Tex. (15)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Oct. 14, 1967	0730	0	-
	0800	.1	-
	0855	.6	-
	1000	.7	-
	1120	1.2	-
	1135	1.3	22
	1140	1.6	26
	1145	1.9	34
	1150	2.1	39
	1155	2.3	60
	1200	2.4	74
	1205	2.5	60
	1210	2.5	57
	1225	2.6	34
	1235	2.6	26
	1300	2.7	24
	1320	2.8	22
	1330	2.8	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-1676 Rebecca Creek near Spring Branch, Tex. (15)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Jan. 18, 1968	0000	0	2.9
	0400	0	2.9
	0500	.1	2.9
	0600	.5	3.3
	0700	1.0	4.8
	0800	3.7	420
	0900	4.2	3,970
	1000	4.5	1,040
	1100	4.6	621
	1200	4.6	371
	1300	4.6	260
	1400	4.6	195
	1500	4.6	153
	1700	4.6	110
	2100	4.6	72
	2400	4.6	62
Jan. 19	0900	4.6	46
	1000	4.8	46
	1200	4.9	46
	1300	4.9	51
	1400	5.5	64
	1500	5.7	371
	1700	5.8	211
	1800	5.8	191
	1900	6.0	191
	2200	6.1	162
	2400	6.1	141
Jan. 20	0100	6.3	137
	0200	6.4	133
	0300	7.0	227
	0400	7.2	1,040
	0500	7.9	1,200
	0600	8.0	1,360
	0700	8.5	824
	0800	9.0	1,440
	0900	9.1	1,230
	1000	9.3	895
	1300	9.4	329
	1400	9.5	309
	1500	9.7	413

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-1676 Rebecca Creek near Spring Branch, Tex. (15)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Jan. 20, 1968-Con.	1600	10.0	420
	1800	10.1	336
	1900	10.2	322
	2100	10.3	420
	2400	10.5	266
Jan. 21	0200	10.6	222
	0300	10.6	216
	0400	10.8	232
	0500	10.8	278
	0600	10.9	272
	0700	11.1	284
	0800	11.1	343
	0900	11.2	297
	1000	11.2	291
	1200	11.2	227
	1800	11.2	149
	2400	11.2	121
May 10	0000	0	3.3
	0100	0	3.3
	0200	.1	3.3
	0800	.1	2.9
	1800	.1	2.9
	1900	.2	2.9
	2400	.2	2.9
May 11	0500	.2	2.9
	0600	.3	2.9
	0700	.4	2.9
	0800	.7	4.3
	0900	.8	4.3
	1000	1.0	4.3
	1100	1.3	4.3
	1200	1.6	4.3
	1300	1.8	4.3
	1400	2.2	7.4
	1500	2.5	12
	1700	2.5	27
	1800	2.5	46
	1900	2.5	46
	2100	2.5	34
	2400	2.5	24

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-1676 Rebecca Creek near Spring Branch, Tex. (15)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 12, 1968	1200	2.5	14
	2400	2.5	14
June 1	0000	0	2.9
	2200	0	2.9
	2300	.1	2.9
	2400	.2	2.9
June 2	0100	.3	2.9
	1400	.3	2.9
	1500	.9	4.3
	1600	1.0	315
	1800	1.0	75
	2000	1.0	30
	2400	1.0	14

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-1766 Threemile Creek near Cuero, Tex. (13)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Oct. 16, 1967	0700	0	-
	0725	.2	-
	0800	.2	-
	0850	1.0	-
	0920	1.2	12
	0950	1.6	27
	1015	2.0	38
	1040	2.3	67
	1110	2.5	82
	1150	2.6	92
	1210	2.6	82
	1300	2.6	57
	1400	2.6	34
	1500	2.6	23
	1600	2.7	16
	1700	2.7	12
	1800	2.7	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-1884 Baugh Creek at Goliad, Tex. (16)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 8, 1968	1125	0	-
	1145	.6	-
	1200	.8	-
	1205	.9	65
	1210	.9	89
	1215	1.0	113
	1220	1.0	125
	1230	1.0	140
	1245	1.1	155
	1300	1.1	175
	1400	1.2	140
	1500	1.4	125
	1600	1.4	125
	1700	1.4	113
	1800	1.4	89
	2000	1.4	78
	2100	1.4	65
	2200	1.3	-
July 22	0600	0	0
	0800	.1	-
	0845	.2	-
	1045	.4	-
	1100	.4	-
	1110	.4	65
	1130	.4	100
	1200	.4	175
	1230	.5	250
	1300	.5	250
	1330	.6	250
	1400	.6	250
	1430	.8	250
	1500	.9	250
	1700	1.0	250
	1800	1.1	175
	1830	1.5	140
	1900	1.9	125
	2000	1.9	113
	2400	1.9	100
July 23	0300	1.9	89
	0400	1.9	78
	0500	1.9	65
	0600	1.9	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-1896 Olmos Creek tributary near Skidmore, Tex. (16)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 11, 1968	1300	0	-
	1305	.1	1.5
	1310	.1	6.2
	1320	.2	58
	1325	.6	74
	1330	1.4	89
	1335	1.5	100
	1345	1.6	165
	1400	2.0	250
	1415	2.2	310
	1430	2.2	350
	1450	2.2	370
	1515	2.2	350
	1545	2.2	330
	1630	2.2	290
	1700	2.2	240
	1800	2.2	130
	1900	2.2	94
	2100	2.2	74
	2300	2.2	58
	2400	2.2	42
May 12	0200	2.2	11
	0400	2.2	3.5
	0600	2.2	1.5
	0700	2.2	-
May 13	1230	0	-
	1235	0	.3
	1240	0	4.5
	1300	0	50
	1310	.1	56
	1320	.3	64
	1330	1.4	72
	1400	1.4	72
	1500	1.4	64
	1600	1.4	50
	1700	1.4	27
	1900	1.4	12
	2100	1.4	7.6
	2400	1.4	4.5
May 14	0200	1.4	.7
	0300	1.4	.3
	0400	1.4	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-2077 Lucas Creek near Pleasanton, Tex. (15)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 10, 1968	0000	0	-
	0100	.04	-
	0200	.05	-
	1910	.05	-
	1915	.07	-
	2245	.07	-
	2250	.12	-
	2300	.91	-
	2400	.92	-
May 11	0045	.92	-
	0050	.93	-
	0130	1.23	15
	0150	1.31	29
	0205	1.45	34
	0220	1.68	41
	0300	1.68	59
	0400	1.68	83
	0500	1.68	101
	0600	1.68	109
	0700	1.68	120
	0745	1.68	134
	0750	1.70	138
	0800	1.70	145
	0900	1.70	184
	1000	1.70	232
	1020	1.70	248
	1040	2.85	260
	1055	3.35	270
	1100	3.42	275
	1115	3.62	290
	1130	3.73	310
	1200	3.74	430
	1230	3.76	675
	1250	3.80	880
	1300	3.86	1,050
	1305	3.93	1,120
	1400	4.05	1,800
	1500	4.10	2,600
	1520	4.15	2,800
	1600	4.15	3,100

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-2077 Lucas Creek near Pleasanton, Tex. (15)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 11, 1968-Con.	1605	4.16	3,300
	1700	4.16	3,500
	1800	4.16	3,400
	1900	4.16	3,100
	2000	4.16	2,800
	2100	4.16	1,950
	2200	4.16	1,300
	2300	4.16	940
	2400	4.16	710
May 12	0100	4.17	510
	0200	4.19	380
	0210	4.20	365
	0300	4.20	290
	0400	4.20	225
	0500	4.20	185
	0600	4.20	148
	0700	4.20	123
	0800	4.20	99
	0900	4.20	80
	1000	4.20	67
	1100	4.20	59
	1200	4.20	51
	1400	4.20	43
	1600	4.20	37
	1730	4.20	35
	1745	4.34	35
	1750	4.54	35
	1800	4.67	35
	1810	5.35	35
	1815	5.41	35
	1820	5.49	35
	1900	5.49	37
	2000	5.49	49
	2200	5.49	128
	2300	5.49	210
	2400	5.49	385
May 13	0100	5.49	800
	0200	5.49	1,040
	0300	5.49	650
	0400	5.49	390

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-2077 Lucas Creek near Pleasanton, Tex. (15)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 13, 1968-Con.	0500	5.49	290
	0600	5.49	225
	0700	5.49	184
	0800	5.49	148
	0900	5.49	125
	1000	5.49	106
	1100	5.49	92
	1200	5.49	78
	1300	5.49	67
	1400	5.49	57
	1500	5.49	49
	1600	5.49	41

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

8-4596 Arroyo San Bartolo at Zapata, Tex. (21)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Sept. 1, 1968	1930	0	-
	2000	.2	-
	2200	.3	-
	2400	.5	-
Sept. 2	0100	1.1	-
	0125	1.4	-
	0200	2.0	-
	0235	2.3	-
	0240	2.4	-
	0250	2.4	-
	0300	2.4	100
	0305	2.5	108
	0315	2.6	100
	0325	2.6	-
	0335	2.6	-
	0340	2.6	-
	0345	2.6	-
	0430	2.8	-
	0450	3.1	-
	0500	3.2	-
	0540	3.3	-
	0550	3.3	-
	0600	3.3	100
	0610	3.3	-
	0620	3.3	-
	0630	3.3	-
	0635	3.3	-

7-2274.6 East Fork Cheyenne Creek tributary near Channing, Tex. (04)

Location.--Lat 35°40'35", long 102°16'55", Hartley County, at culvert on State Highway 354 and 2.5 miles east of Channing.

Drainage area.--0.86 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	June 25, 1965	8.40	2,260
1966	Aug. 31, 1966	a4.84	520
1967	June 29, 1967	5.18	590
1968	July 6, 1968	3.00	32

a Maximum for period Dec. 30, 1965, to Sept. 30, 1966.

7-2274.8 Tecovas Creek tributary near Bushland, Tex. (04)

Location.--Lat 35°15'55", long 102°00'20", Potter County at culvert on Farm Road 1061 and 5.5 miles northeast of Bushland.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	-	-	-
1967	Apr. 11, 1967	5.07	105
1968	Aug. 14, 1968	2.59	11

7-2341.5 White Woman Creek tributary near Darrouzett, Tex. (04)

Location.--Lat 36°24'00", long 100°16'30", Lipscomb County, at culvert on State Highway 305, 4.5 miles southeast of Darrouzett, and 11.9 miles north of Lipscomb.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 31, 1966	5.20	416
1967	June 10, 1967	2.81	35
1968	June 16, 1968	3.15	62

7-2979.2 Middle Tule Draw near Tulia, Tex. (05)

Location.--Lat 34°31'46", long 101°53'30", Swisher County, at culvert on State Highway 86 and 6.5 miles west of Tulia.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	July 4, 1967	a5.39	230
1968	June 16, 1968	9.03	2,500

a Maximum for period Jan. 12 to Sept. 30, 1967.

7-2981.5 Rock Creek tributary near Silverton, Tex. (25)

Location.--Lat 34°28'40", long 101°25'50", Briscoe County, at culvert on State Highway 86 and 6.7 miles west of Silverton.

Drainage area.--13.7 sq mi, of which 11.5 sq mi is probably noncontributing.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 24, 1966	6.70	48
1967	July 13, 1967	5.27	5.5
1968	May 8, 1968	5.53	10

7-2995.75 North Groesbeck Creek tributary near Kirkland, Tex. (25)

Location.--Lat 34°24', long 100°03', Childress County, at culvert on Farm Road 1033, 1.4 miles north of Kirkland, and 1.5 miles upstream from North Groesbeck Creek.

Drainage area.--0.16 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.3 mile; slope index, 90.9 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 19, 1965	a5.32	12
1966	Aug. 23, 1966	8.22	74
1967	May 28, 1967	5.52	16
1968	May 8, 1968	5.59	16

a Maximum for period June 4 to Sept. 30, 1965.

7-2999.4 Oklahoma Draw tributary near Hedley, Tex. (25)

Location.--Lat 34°53'12", long 100°37'18", Donley County, at culvert on State Highway 203 and 2.7 miles northeast of Hedley.

Drainage area.--1.15 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.0 miles; slope index, 53 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 19, 1965	a5.25	87
1966	Apr. 25, 1966	5.20	83
1967	-	<5.00	<63
1968	May 8, 1968	5.97	162

a Maximum for period June 5 to Sept. 30, 1965.
< Less than amount shown.

7-3014.05 Doodlebug Creek near Wheeler, Tex. (25)

Location.--Lat 35°26'40", long 100°13'50", Wheeler County, at culvert on State Highway 152 and 2.5 miles southeast of Wheeler.

Drainage area.--0.19 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.7 mile; slope index, 58 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	-	a<6.43	<83
1968	Aug. 29, 1968	7.70	275

a Maximum for period Jan. 11 to Sept. 30, 1967.
< Less than amount shown.

7-3077.2 Cottonwood Creek tributary near Afton, Tex. (25)

Location.--Lat 33°44'20", long 100°50'30", Dickens County, at culvert on State Highway 70 and 2 miles southwest of Afton.

Drainage area.--1.09 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.9 miles; slope index, 74.8 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	July 5, 1967	a2.23	245
1968	May 9, 1968	3.80	660

a Maximum for period Dec. 6, 1966, to Sept. 30, 1967.

7-3082.2 Plum Creek near Vernon, Tex. (03)

Location.--Lat 34°06'38", long 99°13'22", Wilbarger County, at culvert on Farm Road 433 and 4.0 miles southeast of Vernon.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Apr. 12, 1967	a6.09	265
1968	May 16, 1968	5.79	187

a Maximum for period Jan. 10 to Sept. 30, 1967.

7-3121.4 Beaver Creek tributary near Crowell, Tex. (25)

Location.--Lat 33°58'54", long 99°41'30", Foard County, at culvert on U.S. Highway 70 and 2 miles east of Crowell.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 31, 1966	5.67	385
1967	June 26, 1967	6.37	520
1968	June 1, 1968	4.27	114

7-3123 Wolf Creek near Iowa Park, Tex. (03)

Location.--Lat 33°54'45", long 98°48'30", Wichita County, at culvert on Farm Road 367 and 8.5 miles southwest of Iowa Park.

Drainage area.--8.13 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.9 miles; slope index, 19.7 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 28, 1966	a10.06	(+)
1967	Apr. 12, 1967	10.80	(+)
1968	Apr. 18, 1968	3.66	b124

a Maximum for period July 20 to Sept. 30, 1966.
b Estimated.
+ Discharge not determined.

7-3142 North Fork Little Wichita River tributary near Archer City, Tex. (03)

Location.--Lat 33°39'50", long 98°43'30", Archer County, at culvert on State Highway 25, 1.3 miles upstream from North Fork Little Wichita River, and 7.4 miles northwest of Archer City.

Drainage area.--0.10 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.4 mile; slope index, 234 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	-	a0
1966	Sept. 16, 1966	5.67	215
1967	Apr. 12, 1967	2.95	52
1968	July 7, 1968	4.73	152

a No flow for the period May 25 to Sept. 30, 1965.

7-3155.5 Farmers Creek near Saint Jo, Tex. (03)

Location.--Lat 33°42'45", long 97°33'05", Montague County, at culvert on U.S. Highway 82 and 2.0 miles northwest of Saint Jo.

Drainage area.--0.82 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.85 miles; slope index, 51 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 24, 1966	a3.64	31
1967	June 26, 1967	4.02	57
1968	July 1, 1968	4.70	104

a Maximum for the period Aug. 4 to Sept. 30, 1966.

7-3326.02 Cooper Creek near Bonham, Tex. (01)

Location.--Lat 33°32'24", long 96°12'03", Fannin County, at culvert on Farm Road 1629, 1.7 miles upstream from Bois d'Arc Creek, and 2.9 miles south of Bonham.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 28, 1966	19.11	3,100
1967	Sept. 6, 1967	20.26	3,700
1968	Apr. 19, 1968	17.69	2,430

7-3369.4 McKinney Bayou near Leary, Tex. (19)

Location.--Lat 33°31'33", long 94°11'32", Bowie County, at culvert on Farm Road 2253, 1.1 miles north of Mount Zion, 3.2 miles north of Farm Road 2148, and 4.3 miles north of Leary.

Drainage area.--3.33 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 6.45 miles; slope index, 1 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 25, 1966	15.23	220
1967	May 31, 1967	12.67	130
1968	May 10, 1968	13.08	90

7-3424.5 Nelson Branch near Leonard, Tex. (01)

Location.--Lat 33°21'20", long 96°13'25", Fannin County, at culvert on U.S. Highway 69, 0.4 mile southeast of Hunt-Fannin County line, and 2.2 miles southeast of Leonard.

Drainage area.--0.22 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.78 mile; slope index, 66.6 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 21, 1965	a10.93	16
1966	Apr. 28, 1966	16.52	300
1967	May 30, 1967	17.65	340
1968	Apr. 19, 1968	12.38	68

a Maximum for period June 23 to Sept. 30, 1965.

7-3433.5 Dial Branch near Bagwell, Tex. (01)

Location.--Lat 33°37'50", long 95°10'15", Red River County, at culvert on U.S. Highway 82, 1.8 miles upstream from mouth, and 2.3 miles south of Bagwell.

Drainage area.--1.00 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.45 miles; slope index, 45 ft. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Feb. 9, 1966	16.21	660
1967	Apr. 26, 1967	17.77	880
1968	June 26, 1968	15.92	618

7-3439 Buck Creek near Cookville, Tex. (19)

Location.--Lat 33°11'10", long 94°52'20", Titus County, at culvert on U.S. Highway 67, 1 mile west of Cookville, and 5.5 miles east of Mount Pleasant.

Drainage area.--0.78 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.03 miles; slope index, 87.2 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 24, 1966	17.08	590
1967	May 1, 1967	13.30	190
1968	Sept. 18, 1968	14.95	350

7-3444.9 Dragoo Creek near Mount Pleasant, Tex. (19)

Location.--Lat 33°09'40", long 95°01'55", Titus County, at culvert on Interstate Highway 30, 1.8 miles upstream from mouth, and 3.8 miles west of Mount Pleasant.

Drainage area.--4.27 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.6 miles; slope index, 26.9 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Apr. 13, 1967	a15.03	1,140
1968	Apr. 1, 1968	15.09	1,170

a Maximum for period Jan. 1 to Sept. 30, 1967.

7-3446 Williamson Creek near Pittsburg, Tex. (19)

Location.--Lat 33°02'55", long 94°52'35", Titus County, at culvert on Farm Road 2348 and 1.3 miles northeast of Pittsburg.

Drainage area.--7.11 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 6.8 miles; slope index, 20.3 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	May 31, 1967	a12.94	310
1968	May 10, 1968	12.96	320

a Maximum for period Jan. 1 to Sept. 30, 1967.

7-3460.1 Cypress Creek tributary near Jefferson, Tex. (19)

Location.--Lat 32°42'50", long 94°25'52", Marion County, at culvert on Farm Road 2208, 4.3 miles upstream from Cypress Creek, and 5.5 miles southwest of Jefferson.

Drainage area.--0.21 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.75 mile; slope index, 75 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 24, 1966	13.78	129
1967	-	<10.74	<7
1968	Sept. 4, 1968	11.07	13

< Less than amount shown.

7-3460.72 Taylor Branch near Smithland, Tex. (19)

Location.--Lat 32°47'20", long 94°15'02", Marion County, at culvert on State Highway 49 and 6.4 miles northeast of Jefferson.

Drainage area.--0.73 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.40 miles; slope index, 61 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 24, 1966	13.33	430
1967	Nov. 10, 1966	10.73	38
1968	May 9, 1968	11.30	100

8-0177 Burnett Branch near Canton, Tex. (10)

Location.--Lat 32°32'17", long 95°51'44", Van Zandt County, at culvert on State Highway 19 and 1.3 miles south of Canton.

Drainage area.--0.33 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.80 mile; slope index, 22 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 24, 1966	14.49	330
1967	May 31, 1967	11.14	39
1968	Oct. 16, 1967	13.05	184

8-0208 Grace Creek tributary at Longview, Tex. (10)

Location.--Lat 32°31'02", long 94°44'23", Gregg County, at culvert on U.S. Highway 259, 1.2 miles north of Longview, and 1.7 miles upstream from mouth.

Drainage area.--5.05 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 4.15 miles; slope index, 28 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	July 4, 1967	a13.02	620
1968	May 9, 1968	13.15	670

a Maximum for period Jan. 1 to Sept. 30, 1967.

8-0220.1 Redmon Branch near Hallsville, Tex. (19)

Location.--Lat 32°29'41", long 94°28'47", Harrison County, at culvert on Farm Road 968, 2.6 miles upstream from Potters Creek, and 5.6 miles east of Hallsville.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 24, 1966	15.70	725
1967	July 4, 1967	14.81	150
1968	Apr. 1, 1968	12.90	76

SABINE RIVER BASIN

8-0242.9 Dorsey Branch near Milam, Tex. (11)

Location.--Lat 31°30'44", long 93°50'45", Sabine County, at culvert on State Highway 87 and 5.5 miles north of Milam.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	-	<1.83	<122
1968	July 24, 1968	5.72	382

< Less than amount shown.

SABINE RIVER BASIN

8-0285.05 Moore Branch near Newton, Tex. (20)

Location.--Lat 30°53'00", long 93°40'59", Newton County, at culvert on Farm Road 1414 and 5.2 miles northeast of Newton.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	-	a<0.88	<19
1967	Apr. 13, 1967	3.13	140
1968	Apr. 9, 1968	2.83	118

a Maximum for period July 29 to Sept. 30, 1966.
< Less than amount shown.

SABINE RIVER BASIN

8-0307 Adams Bayou tributary near Deweyville, Tex (20)

Location.--Lat 30°14'53", long 93°48'56", Newton County, at culvert on State Highway 12 and 5.5 miles southwest of Deweyville.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	-	a<0.63	(+)
1967	Apr. 14, 1967	1.74	≠90
1968	June 22, 1968	2.94	195

a Maximum for period Aug. 2 to Sept. 30, 1966.
+ Discharge not determined.
< Less than amount shown.
≠ Revised.

NECHES RIVER BASIN

8-0311 Bethlehem Branch near Van, Tex. (10)

Location.--Lat 32°29'04", long 95°38'35", Van Zandt County, at culvert on Farm Road 314, 0.7 mile upstream from mouth, and 3.1 miles south of Van.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 23, 1966	15.83	660
1967	May 31, 1967	14.25	280
1968	May 10, 1968	14.22	270

8-0321 Hurricane Creek tributary near Palestine, Tex. (10)

Location.--Lat 31°52'10", long 95°34'20", Anderson County, at culvert on State Highway 155 and 8.5 miles northeast of Palestine.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	-	a<0.92	<6
1967	Apr. 13, 1967	1.75	29
1968	May 11, 1968	1.86	32

a Maximum for period July 22 to Sept. 30, 1966.
< Less than amount shown.

8-0322.5 One Arm Creek near Maydelle, Tex. (10)

Location.--Lat 31°48'29", long 95°17'19", Cherokee County, at culvert on U.S. Highway 84 and 1.0 mile east of Maydelle.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	July 2, 1967	a2.90	158
1968	Apr. 2, 1968	3.55	335

a Maximum for period Mar. 9 to Sept. 30, 1967.

8-0323 Squirrel Creek near Elkhart, Tex. (10)

Location.--Lat 31°37'09", long 95°30'15", Anderson County, at culvert on State Highway 294 and 4.5 miles east of Elkhart.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	-	a<1.35	<48
1968	Apr. 8, 1968	2.26	136

a Maximum for period Mar. 8 to Sept. 30, 1967.
< Less than amount shown.

8-0332.5 Piney Creek tributary near Pennington, Tex. (11)

Location.--Lat 31°12'12", long 95°06'58", Trinity County, at culvert on Farm Road 358 and 7.5 miles east of Pennington.

Drainage area.--1.17 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream 2.30 miles; slope index, 27 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	June 1, 1967	a2.80	134
1968	Apr. 8, 1968	4.35	265

a Maximum for period Mar. 13 to Sept. 30, 1967.

8-0334.5 Shawnee Creek tributary near Huntington, Tex. (11)

Location.--Lat 31°13'17", long 94°30'51", Angelina County, at culvert on U.S. Highway 69 and 5.3 miles southeast of Huntington.

Drainage area.--0.52 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.30 miles; slope index, 64 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	-	a<1.86	(+)
1967	Oct. 4, 1966	2.31	28
1968	Apr. 8, 1968	8.63	310

a Maximum for period Aug. 3 to Sept. 30, 1966.
+ Discharge not determined.
< Less than amount shown.

8-0334.8 Greenwood Creek tributary near Colmesneil, Tex. (20)

Location.--Lat 30°58'48", long 94°24'22", Tyler County, at culvert on U.S. Highway 69 and 5.2 miles north of Colmesneil.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	-	a<2.70	(+)
1967	Apr. 10, 1967	3.37	50
1968	-	<2.70	<26

a Maximum for period July 28 to Sept. 30, 1966.
+ Discharge not determined.
< Less than amount shown.

8-0373 Gingham Branch near Mount Enterprise, Tex. (10)

Location.--Lat 31°55'14", long 94°33'33", Rusk County, at culvert on U.S. Highway 84 and 7.5 miles east of Mount Enterprise.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	June 1, 1967	a6.92	20
1968	Apr. 8, 1968	10.31	132

a Maximum for period Mar. 10 to Sept. 30, 1967.

8-0399 Little Sandy Creek tributary near Jasper, Tex. (20)

Location.--Lat 30°56'39", long 93°56'16", Jasper County, at culvert on State Highway 63 and 4.0 miles east of Jasper.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	-	a<2.35	(+)
1968	-	<2.5	<20

a Maximum for period Mar. 11 to Sept. 30, 1967.
+ Discharge not determined.
< Less than amount shown.

8-0414 Drakes Branch near Spurger, Tex. (20)

Location.--Lat 30°41'02", long 94°15'32", Tyler County, at culvert on Farm Road 1013 and 5.2 miles west of Spurger.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Apr. 13, 1967	a1.87	118
1968	June 21, 1968	2.61	220

a Maximum for period Mar. 12 to Sept. 30, 1967.

8-0425.5 West Fork Double Bayou near Anahuac, Tex. (20)

Location.--Lat 29°45'39", long 94°38'00", Chambers County, at bridge on Farm Road 562 and 3 miles southeast of Anahuac.

Drainage area.--4.43 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.15 miles; slope index, 0.5 ft per mile. (Map scale, 1:24,000).

Remarks.--This site was instrumented with a water-stage recorder during the periods March to July 1963 and November 1963 to February 1965 as part of the Houston Ship Channel Model Study.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 5, 1966	a12.22	(+)
1967	≠May 21, 1967	≠13.60	250
1968	Apr. 9, 1968	15.80	300

a Maximum for period Aug. 5 to Sept. 30, 1966.
+ Discharge not determined.
≠ Revised.

8-0427 North Creek near Jacksboro, Tex. (02)

Location.--Lat 33°16'55", long 98°17'55", Jack County, on left bank at downstream side of bridge on U.S. Highway 281, 1.5 miles upstream from Henderson Creek, 9.3 miles northwest of Jacksboro, and 14 miles upstream from mouth.

Drainage area.--21.6 sq mi.

Gage.--Recording. Datum of gage is 1,016.33 ft above mean sea level (State Highway Department bench mark).

Historical data.--Flood of Apr. 28, 1957, was the highest since at least 1915, from information by local resident.

Remarks.--Three recording and two non-recording rain gages located in the watershed. Tabulations of significant storm rainfall and run-off data are on file in the U.S. Geological Survey District office.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1956	May 3, 1956	21.58	5,700
1957	Apr. 28, 1957	24.45	6,990
1958	Nov. 4, 1957	12.56	1,760
1959	June 26, 1959	14.45	2,500
1960	Oct. 3, 1959	19.65	4,830
1961	July 16, 1961	15.23	2,840
1962	June 10, 1962	18.10	4,130
1963	Apr. 28, 1963	11.55	1,370
1964	May 29, 1964	13.60	1,360
1965	Sept. 18, 1965	16.82	2,250
1966	Apr. 23, 1966	17.38	2,790
1967	May 31, 1967	12.25	1,150
1968	Mar. 20, 1968	10.49	621

8-0442 Walker Creek near Boyd, Tex. (02)

Location.--Lat 33°04'32", long 97°34'58", Wise County, at culvert on State Highway 114, 1.1 miles upstream from Salt Creek, and 1.1 miles west of Boyd.

Drainage area.--2.95 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.35 miles; slope index, 44 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 22, 1965	a12.75	270
1966	Feb. 8, 1966	13.83	450
1967	May 30, 1967	13.23	350
1968	Mar. 19, 1968	14.50	580

a Maximum for period June 16 to Sept. 30, 1965.

8-0472 West Creek at Fort Worth, Tex. (02)

Location.--Lat 32°40'25", long 97°22'06", Tarrant County, at culvert on Bilglade Road at intersection of West Creek Drive in Fort Worth.

Drainage area.--0.31 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.85 mile; slope index, 119 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	July 14, 1965	a14.18	275
1966	Aug. 29, 1966	16.30	495
1967	May 30, 1967	13.86	250
1968	June 15, 1968	12.64	127

a Maximum for period July 2 to Sept. 30, 1965.

8-0489 Deer Creek tributary near Crowley, Tex. (02)

Location.--Lat 32°35'06", long 97°21'04", Tarrant County, at culvert on Farm Road 731, 0.7 mile upstream from mouth, and 0.7 mile northeast of Crowley.

Drainage area.--5.86 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.4 miles; slope index, 23 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	-	a<11.51	<170
1968	Apr. 19, 1968	14.98	1,060

a Maximum for period Jan. 12 to Sept. 30, 1967.
< Less than amount shown.

8-0502 Elm Fork Trinity River subwatershed No. 6-0 near Muenster, Tex. (03)

Location.--Lat 33°37'13", long 97°24'15", Cooke County, near center of earthfill dam on unnamed tributary of Elm Fork Trinity River, 1.0 mile west of Farm Road 373, and 2.6 miles southwest of Muenster.

Drainage area.--0.77 sq mi.

Gage.--Recording. Datum of gage is 941.75 ft above mean sea level, datum of 1929 (U.S. Soil Conservation Service bench mark).

Remarks.--Peak discharge based on maximum inflow (average for 5 or 15-minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. Recording rain gage located at station. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1957	June 1, 1957	449
1958	May 1, 1958	688
1959	Nov. 16, 1958	34
1960	Oct. 3, 1959	842
1961	Mar. 25, 1961	51
1962	June 18, 1962	287
1963	Nov. 26, 1962	221
1964	Sept. 21, 1964	261
1965	Nov. 18, 1964	367
1966	Feb. 9, 1966	476
1967	May 30, 1967	316
1968	Mar. 20, 1968	188

8-0526.3 Little Elm Creek subwatershed No. 10 near Gunter, Tex. (18)

Location.--Lat 33°24'33", long 96°48'41", Grayson County, near center of dam on Walnut Fork, 1.6 miles upstream from mouth and, 4.7 miles southwest of Gunter.

Drainage area (revised).--2.10 sq mi.

Gage.--Water-stage recorder. Datum of gage is 615.51 ft above mean sea level, datum of 1929 (Soil Conservation Service bench mark).

Topographic characteristics.--Length of main stream, 2.52 miles; slope index, 37.3 ft per mile. (Map scale, 1:24,000).

Remarks.--Peak discharge based on maximum inflow (average for 5 or 15-minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. Rain gage 3S located 1/4 mile southeast of dam. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1966	ǂApr. 28, 1966	ǂ823
1967	ǂMay 30, 1967	ǂ3,240
1968	Mar. 20, 1968	635

ǂ Revised.

8-0531 Jones Valley Creek tributary near Forestburg, Tex. (03)

Location.--Lat 33°33'15", long 97°37'05", Montague County, at culvert on Farm Road 455, 0.7 mile upstream from Jones Valley Creek, and 3.8 miles northwest of Forestburg.

Drainage area.--1.70 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.35 miles; slope index, 78.5 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 19, 1965	a17.80	605
1966	Feb. 9, 1966	20.15	860
1967	Sept. 7, 1967	14.66	305
1968	Mar. 19, 1968	12.23	122

a Maximum for period June 22 to Sept. 30, 1965.

8-0542 Gamble Branch near Argyle, Tex. (18)

Location.--Lat 33°04'53", long 97°11'48", Denton County, at culvert on U.S. Highway 377, and 2.8 miles south of Argyle.

Drainage area.--0.50 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.88 mile; slope index, 89 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 22, 1965	a11.56	68
1966	Apr. 29, 1966	14.17	306
1967	May 21, 1967	11.38	57
1968	May 13, 1968	14.18	310

a Maximum for period June 18 to Sept. 30, 1965.

8-0556 Joes Creek at State Highway 114, Dallas, Tex. (18)

Location.--Lat 32°51'33", long 96°53'00", Dallas County, at bridge on State Highway 114, Dallas, and 0.9 mile upstream from mouth.

Drainage area.--7.51 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1953.

Historical data.--Since at least 1904, maximum discharge that of Oct. 8, 1962; maximum elevation, 431 ft in 1908, backwater from Trinity River.

Remarks.--Urbanizing.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1962	July 27, 1962	423.6	3,100
1963	Oct. 8, 1962	425.3	7,430
1964	Sept. 21, 1964	420.95	1,440
1965	May 10, 1965	421.30	1,520
1966	Apr. 28, 1966	426.4	1,350
1967	Apr. 21, 1967	418.50	930
1968	Aug. 13, 1968	421.18	1,500

8-0557 Bachman Branch at Dallas, Tex. (18)

Location.--Lat 32°51'36", long 96°50'12", Dallas County, on left bank on downstream side of bridge on Midway Road in Dallas, 1,400 ft south of Northwest Highway, 1.5 miles upstream from Bachman Lake Dam, and 6.0 miles northwest of Dallas City Hall.

Drainage area.--10.0 sq mi.

Gage.--Water-stage recorder. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1953.

Topographic characteristics.--Length of main stream, 6.0 miles; slope index, 31.8 ft per mile. (Map scale, 1:24,000).

Historical data.--Maximum stage known since at least 1900, that of Apr. 28, 1966, from information by local residents. The second greatest flood since 1900 occurred Oct. 8, 1962.

Remarks.--This watershed is about 75% urbanized (1966). Six recording rain gages are located in the watershed above the station. Tabulations of significant rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1963	Oct. 8, 1962	465.6	9,200
1964	Sept. 21, 1964	459.30	3,620
1965	May 10, 1965	461.43	5,170
1966	Apr. 28, 1966	467.97	16,000
1967	Apr. 21, 1967	455.21	1,450
1968	Aug. 13, 1968	455.68	1,760

8-0565 Turtle Creek at Dallas, Tex. (18)

Location.--Lat 32°48'26", long 96°48'08", Dallas County, on left bank 68 ft upstream from Hall Street Dam, 210 ft upstream from Hall Street in Dallas, and 2.0 miles north of Dallas County Courthouse.

Drainage area.--7.98 sq mi.

Gage.--Recording. Datum of gage is 428.13 ft above mean sea level, datum of 1929.

Historical data.--Flood of Apr. 28, 1966, reached the highest stage since at least 1903.

Remarks.--Five recording rain gages installed in 1961 are located in the watershed above this station and tabulations of significant rainfall and runoff data are on file in the U.S. Geological Survey District office. The watershed is in a highly-developed urban area.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1947	Aug. 27, 1947	6.8	3,350
1948	May 11, 1948	4.68	1,630
1949	May 18, 1949	6.15	2,800
1950	May 1, 1950	5.29	2,060
1951	Sept. 12, 1951	4.82	1,700
1952	May 17, 1952	5.47	2,220
1953	Apr. 23, 1953	3.54	910
1954	Apr. 12, 1954	6.40	2,980
1955	June 18, 1955	3.44	852
1956	May 1, 1956	4.84	1,740
1957	Apr. 26, 1957	7.30	3,850
1958	Apr. 26, 1958	6.54	3,070
1959	Feb. 14, 1959	4.47	1,460
1960	Oct. 1, 1959	8.10	4,650
1961	Oct. 13, 1960	4.08	1,240
1962	July 27, 1962	7.96	4,640
1963	Apr. 28, 1963	7.77	4,290
1964	Sept. 21, 1964	6.79	3,240
1965	May 10, 1965	7.97	4,520
1966	Apr. 28, 1966	10.54	12,200
1967	Apr. 21, 1967	5.14	1,790
1968	May 13, 1968	6.77	3,220

8-0570.2 Coombs Creek at Sylvan Avenue, Dallas, Tex. (18)

Location.--Lat 32°46'01", long 96°50'07", Dallas County, at bridge on Sylvan Avenue, Dallas, and 1.2 miles upstream from mouth.

Drainage area.--4.75 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1953.

Remarks.--Urbanizing.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	May 10, 1965	426.55	4,260
1966	Apr. 28, 1966	423.33	2,780
1967	June 12, 1967	420.50	1,570
1968	June 16, 1968	423.59	2,900

8-0570.5 Cedar Creek at Bonnie View Road, Dallas, Tex. (18)

Location.--Lat 32°44'50", long 96°47'44", Dallas County, at bridge on Bonnie View Road, Dallas, and 0.9 mile upstream from mouth.

Drainage area.--9.42 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1953.

Remarks.--Urbanizing.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	May 10, 1965	404.15	7,300
1966	Apr. 28, 1966	404.04	6,260
1967	Apr. 21, 1967	398.04	2,140
1968	June 16, 1968	404.3	7,500

8-0571.2 Spanky Branch at McCallum Lane, Dallas, Tex. (18)

Location.--Lat 32°57'58", long 96°48'11", Dallas County, at bridge on McCallum Lane, Dallas, and 0.5 mile upstream from mouth.

Drainage area.--6.77 sq mi.

Gage.--Crest stage only. Datum of gage is mean sea level, datum of 1929,

Historical data.--Maximum elevation known since at least 1917, that of Sept. 21, 1964, from information by local residents.

Remarks.--Rural.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1962	July 27, 1962	567.03	4,020
1963	Oct. 8, 1962	564.61	3,000
1964	Sept. 21, 1964	572.02	7,870
1965	May 10, 1965	563.91	2,650
1966	Apr. 28, 1966	569.3	5,000
1967	May 31, 1967	556.27	635
1968	Mar. 20, 1968	559.58	1,470

8-0571.4 Cottonwood Creek at Forest Lane, Dallas, Tex. (18)

Location.--Lat 32°54'33", long 96°45'54", Dallas County, at bridge on Forest Lane, Dallas, and 0.2 mile upstream from Floyd Branch.

Drainage area.--8.50 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1953.

Historical data.--Maximum elevation known since at least 1892, that of Apr. 28, 1966.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1962	July 27, 1962	509.90	5,090
1963	Oct. 8, 1962	511.74	17,400
1964	Sept. 21, 1964	510.09	6,200
1965	May 10, 1965	509.49	4,450
1966	Apr. 28, 1966	512.32	17,600
1967	May 31, 1967	509.20	4,080
1968	Aug. 13, 1968	505.51	1,380

8-0571.6 Floyd Branch at Forest Lane, Dallas, Tex. (18)

Location.--Lat 32°54'33", long 96°45'34", Dallas County, at bridge on Forest Lane, Dallas, and 0.3 mile upstream from mouth.

Drainage area.--4.17 sq mi.

Gage.--Crest stage only. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1953.

Historical data.--Maximum elevation known since at least 1909, that of Apr. 28, 1966.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1962	July 27, 1962	509.62	3,200
1963	Oct. 8, 1962	512.63	4,850
1964	Sept. 21, 1964	510.26	3,500
1965	May 10, 1965	508.87	2,850
1966	Apr. 28, 1966	514.19	8,590
1967	-	<503.65	<1,170
1968	Mar. 20, 1968	503.39	1,110

< Less than amount shown.

8-0573.2 Ash Creek at Highland Road, Dallas, Tex. (18)

Location.--Lat 32°48'18", long 96°43'04", Dallas County, at bridge on Highland Road, Dallas, and 0.4 mile upstream from mouth.

Drainage area.--6.92 sq mi.

Gage.--Crest stage only. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1961.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1963	Apr. 28, 1963	430.99	4,700
1964	Sept. 21, 1964	<427.28	<3,150
1965	May 10, 1965	429.74	3,600
1966	Apr. 28, 1966	431.38	5,180
1967	May 31, 1967	429.52	3,400
1968	Apr. 19, 1968	427.58	1,540

< Less than amount shown.

8-0573.4 Forney Creek at Lawnview Avenue, Dallas, Tex. (18)

Location.--Lat 32°46'45", long 96°43'02", Dallas County, at culvert on Lawnview Avenue, Dallas, and 0.8 mile upstream from mouth.

Drainage area.--1.84 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1961.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1963	Apr. 28, 1963	431.36	621
1964	Sept. 21, 1964	430.04	245
1965	May 10, 1965	431.21	566
1966	Apr. 28, 1966	435.42	1,090
1967	-	-	-
1968	Mar. 20, 1968	428,80	394

8-0574.2 Fivemile Creek at U.S. Highway 77, Dallas, Tex. (18)

Location.--Lat 32°41'15", long 96°49'22", Dallas County, at bridge on U.S. Highway 77, Dallas, 0.2 mile upstream from Woody Branch, and 8.0 miles upstream from mouth.

Drainage area.--13.2 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1961.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	May 10, 1965	464.88	2,400
1966	Apr. 28, 1966	470.32	7,000
1967	June 12, 1967	459.78	1,440
1968	Sept. 24, 1968	463.70	2,880

8-0574.25 Woody Branch at U.S. Highway 77, Dallas, Tex. (18)

Location.--Lat 32°40'58", long 96°49'22", Dallas County, at bridge on U.S. Highway 77, Dallas, and 0.4 mile upstream from mouth.

Drainage area.--11.5 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1961.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	May 10, 1965	463.3	500
1966	Apr. 28, 1966	471.60	3,860
1967	June 12, 1967	464.13	802
1968	Sept. 4, 1968	468.50	2,680

8-0574.3 Fivemile Creek at Lancaster Road, Dallas, Tex. (18)

Location.--Lat 32°40'49", long 96°47'10", Dallas County, at bridge on Lancaster Road, Dallas, and 6.7 miles upstream from mouth.

Drainage area.--37.9 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1961.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	May 10, 1965	431.7	2,520
1966	Apr. 28, 1966	437.68	9,150
1967	June 12, 1967	430.85	1,760
1968	Sept. 4, 1968	436.14	6,900

8-0575 Honey Creek subwatershed No. 11, near McKinney, Tex. (18)

Location.--Lat 33°18'12", long 96°41'22", Collin County, near center of dam on unnamed tributary of Honey Creek, 1.5 miles west of Farm Road 543, and 8.4 miles northwest of McKinney.

Drainage area.--2.14 sq mi.

Gage.--Recording. Datum of gage is 629.00 ft above mean sea level, datum of 1929.

Remarks.--Peak discharge based on maximum inflow (average for 5 or 30-minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. Recording rain gage located at station. Tabulations of significant rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1953	May 15, 1953	268
1954	June 8, 1954	235
1955	Feb. 19, 1955	42
1956	Feb. 17, 1956	264
1957	May 21, 1957	1,630
1958	May 1, 1958	1,880
1959	July 24, 1959	156
1960	Aug. 26, 1960	320
1961	May 1, 1961	1,320
1962	Apr. 27, 1962	169
1963	May 30, 1963	546
1964	Sept. 21, 1964	1,380
1965	Nov. 18, 1964	842
1966	Apr. 30, 1966	3,380
1967	May 30, 1967	530
1968	Mar. 20, 1968	827

8-0580 Honey Creek subwatershed No. 12 near McKinney, Tex. (18)

Location.--Lat 33°18'20", long 96°40'12", Collin County, near center of dam on unnamed tributary of Honey Creek, 0.5 mile west of Farm Road 543, and 7.8 miles northwest of McKinney.

Drainage area.--1.26 sq mi.

Gage.--Recording. Datum of gage is 623.00 ft above mean sea level, datum of 1929.

Remarks.--Peak discharge based on maximum inflow (average for 5 or 30-minute interval), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. One nonrecording and two recording rain gages located in the watershed above the station. Tabulations of significant rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1953	Apr. 28, 1953	a423
1954	June 15, 1954	212
1955	Oct. 23, 1954	123
1956	Feb. 17, 1956	295
1957	May 21, 1957	1,490
1958	May 1, 1958	1,410
1959	July 24, 1959	40
1960	June 8, 1960	286
1961	May 1, 1961	589
1962	Apr. 24, 1962	158
1963	May 30, 1963	663
1964	Sept. 21, 1964	850
1965	May 28, 1965	791
1966	Apr. 30, 1966	1,370
1967	May 30, 1967	907
1968	Mar. 20, 1968	624

a Unadjusted for rainfall on water surface.

8-0592 Arls Branch near Westminister, Tex. (18)

Location.--Lat 33°21'20", long 96°26'35", Collin County, at culvert on State Highway 121 and 1.2 miles east of Westminister.

Drainage area.--0.52 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.00 mile; slope index, 86 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 21, 1965	a13.48	170
1966	Apr. 28, 1966	14.95	310
1967	May 30, 1967	16.97	500
1968	May 10, 1968	16.13	420

a Maximum for period June 23 to Sept. 30, 1965.

8-0628.5 Bachelor Creek near Terrell, Tex. (18)

Location.--Lat 32°42'42", long 96°17'52", Kaufman County, at culvert on Interstate Highway 20, 1.7 miles northwest of State Highway 34, and 2.2 miles southwest of Terrell.

Drainage area.--13.0 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 12.0 miles; slope index, 8 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	May 1, 1967	a13.92	430
1968	Oct. 15, 1967	15.58	1,150

a Maximum for period Jan. 31 to Sept. 30, 1967.

8-0630.05 Red Oak Branch near Eustace, Tex. (10)

Location.--Lat 32°18'36", long 95°57'38", Henderson County, at culvert on Farm Road 2709, 1.3 miles upstream from Clear Creek, and 2.2 miles east of Eustace.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 26, 1966	16.53	1,300
1967	Apr. 22, 1967	10.86	19
1968	May 9, 1968	15.98	700

8-0631.8 Briar Creek tributary near Corsicana, Tex. (18)

Location.--Lat 32°02'55", long 96°34'45", Navarro County, at culvert on Farm Road 744, 1.3 miles upstream from Briar Creek, and 7.7 miles west of Corsicana.

Drainage area.--0.72 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.28 miles; slope index, 39.6 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 23, 1966	13.90	560
1967	Sept. 5, 1967	13.08	390
1968	May 10, 1968	14.39	660

8-0632 Pin Oak Creek near Hubbard, Tex. (09)

Location.--Lat 31°48'05", long 96°43'10", Hill County, on right bank 85 ft downstream from bridge on State Highway 171 and 5.8 miles southeast of Hubbard.

Drainage area.--17.6 sq mi.

Gage.--Recording. Datum of gage is 463.08 ft above mean sea level, datum of 1929, supplementary adjustment of 1942.

Topographic characteristics.--Length of main stream, 8.0 miles; slope index, 14.2 ft per mile. (Map scale, 1:24,000).

Historical data.--Maximum stage since at least 1900, about 17 ft in August 1919, from information by local resident.

Remarks.--Floodwater-retarding structures partially controlling 7.29 sq mi above this station were built during 1963. Six rain gages are operated in the watershed above this station. Tabulations of significant rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1958	Aug. 24, 1958	13.86	4,340
1959	June 24, 1959	13.73	4,100
1960	Oct. 4, 1959	11.52	1,810
1961	June 18, 1961	11.60	1,870
1962	Apr. 27, 1962	12.42	2,580
1963	Apr. 28, 1963	4.52	89
1964	Sept. 17, 1964	4.65	126
1965	May 14, 1965	11.15	1,230
1966	Apr. 24, 1966	11.98	2,040
1967	June 12, 1967	9.90	815
1968	May 10, 1968	13.03	3,300

8-0635.5 Alvarado Branch near Alvarado, Tex. (02)

Location.--Lat 32°24'49", long 97°12'20", Johnson County, at culvert on Farm Road 1706, 0.2 mile south of U.S. Highway 67, and 0.6 mile northeast of Alvarado.

Drainage area.--0.84 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.42 miles; slope index, 50 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	a<10.63	<15
1966	Apr. 25, 1966	14.42	550
1967	Sept. 22, 1967	12.01	170
1968	May 9, 1968	14.63	590

a Maximum for period July 26 to Sept. 30, 1965.
< Less than amount shown.

8-0636.2 Kings Branch near Reagor Springs, Tex. (18)

Location.--Lat 32°20'41", long 96°47'02", Ellis County, at culvert on Rock Island and Pacific Railroad, 0.7 mile upstream from Waxahachie Creek, and 1.8 miles northwest of Reagor Spring.

Drainage area.--0.62 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.18 miles; slope index, 44 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	May 16, 1965	18.50	580
1966	Apr. 24, 1966	17.52	470
1967	-	<11.21	<12
1968	Aug. 27, 1968	15.91	305

< Less than amount shown.

8-0646.3 Saline Branch tributary near Bethel, Tex. (10)

Location.--Lat 31°55'46", long 95°55'58", Anderson County, at culvert on U.S. Highway 287 and 0.3 mile northwest of Bethel.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Sept. 9, 1966	a4.36	51
1967	Apr. 13, 1967	3.88	36
1968	Mar. 11, 1968	4.65	61

a Maximum for period July 20 to Sept. 30, 1966.

8-0653.2 Mayes Branch near Latexo, Tex. (11)

Location.--Lat 31°25'58", long 95°28'29", Houston County, at culvert on U.S. Highway 287 and 2.6 miles north of Latexo.

Drainage area.--4.26 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.60 miles; slope index, 36 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	-	a<1.73	(+)
1967	-	<1.73	(+)
1968	Sept. 5, 1968	5.31	236

a Maximum for period July 26 to Sept. 30, 1966
+ Discharge not determined.
< Less than amount shown.

8-0662.8 Bluff Creek tributary near Livingston, Tex. (11)

Location.--Lat 30°41'52", long 94°46'58", Polk County, at culvert on U.S. Highway 190 and 9.2 miles east of Livingston.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	a<1.37	<20
1966	-	<1.37	<20
1967	-	<1.37	<20
1968	June 22, 1968	4.26	145

a Maximum for period Aug. 20 to Sept. 30, 1965.
< Less than amount shown.

8-0667 Tanner Bayou tributary near Moss Hill, Tex. (20)

Location.--Lat 30°20'08", long 94°45'06", Liberty County, at culvert on State Highway 146 and 6.2 miles north of Moss Hill.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	a<1.62	(+)
1966	Feb. 9, 1966	6.24	525
1967	May 20, 1967	2.37	135
1968	May 17, 1968	2.83	170

a Maximum for period Aug. 24 to Sept. 30, 1965.
+ Discharge not determined.
< Less than amount shown.

SAN JACINTO RIVER BASIN

8-0675.5 Welch Branch near Huntsville, Tex. (17)

Location.--Lat 30°38'33", long 95°40'47", Walker County, at culvert on Farm Road 1791 and 6.9 miles southwest of Huntsville.

Drainage area.--2.35 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 4.7 miles; slope index, 20 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	a<2.46	<12
1966	Apr. 24, 1966	b5.30	127
1967	-	<2.46	<12
1968	June 21, 1968	5.09	138

a Maximum for period Aug. 19 to Sept. 30, 1965.
b Occurred on Feb. 10, 1966, backwater from log jam in channel downstream from gage.
< Less than amount shown.

SAN JACINTO RIVER BASIN

8-0677.5 Landrum Creek tributary near Montgomery, Tex. (12)

Location.--Lat 30°21'03", long 95°41'50", Montgomery County, at culvert on State Highway 149 and 2.4 miles south of Montgomery.

Drainage area.--0.08 sq mi (revised).

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.42 mile; slope index, 213 ft (revised) per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	a<1.94	(+)
1966	Apr. 24, 1966	7.88	114
1967	Sept. 21, 1967	5.13	57
1968	Mar. 10, 1968	8.82	129

a Maximum for period Aug. 18 to Sept. 30, 1965.
+ Discharge not determined.
< Less than amount shown.

8-0683 Mill Creek tributary near Dobbin, Tex. (12)

Location.--Lat 30°15'37", long 95°46'14", Montgomery County, at culvert on Farm Road 1486 and 7.8 miles south of Dobbin.

Drainage area.--4.07 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.65 miles; slope index, 15 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Sept. 21, 1967	a3.50	19
1968	June 24, 1968	8.25	670

a Maximum for period Mar. 16 to Sept. 30, 1967.

8-0698.5. Bear Creek near Cleveland, Tex. (11)

Location.--Lat 30°26'58", long 95°13'11", San Jacinto County, at culvert on Farm Road 1725 and 12.9 miles northwest of Cleveland.

Drainage area.--1.46 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.25 miles; slope index, 45 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	-	a<2.58	<80
1968	June 24, 1968	4.71	290

a Maximum for period Mar. 15 to Sept. 30, 1967.
< Less than amount shown.

8-0737.5 Stoney Brook Street Ditch at Houston, Tex. (12)

Location.--Lat 29°44'05", long 95°30'22", Harris County, at culvert on Stoney Brook Street in west Houston.

Drainage area.--0.50 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1964.

Remarks.--Drainage area is urban. Impervious cover was 33 percent as of October 1966.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1967	Sept. 21, 1967	65.78	145
1968	Sept. 14, 1968	67.54	247

8-0738 Bering Ditch at Woodway Drive, Houston, Tex. (12)

Location.--Lat 29°45'22", long 95°29'44", Harris County, at bridge on Woodway Drive in west Houston.

Drainage area.--2.74 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustments of 1957 and 1959.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Dec. 10, 1964	53.14	91
1966	May 18, 1966	55.58	724
1967	Sept. 21, 1967	55.30	535
1968	Sept. 14, 1968	57.81	1,580

8-0741 Cole Creek at Guhn Road, Houston, Tex. (12)

Location.--Lat 29°51'24", long 95°30'55", Harris County, at bridge on Guhn Road in northwest Houston.

Drainage area.--7.05 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1957.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Feb. 16, 1965	87.06	266
1966	Apr. 14, 1966	90.39	744
1967	Apr. 13, 1967	85.79	79
1968	ǂMay 12, 1968	ǂ89.94	ǂ503

ǂ Revised.

8-0741.5 Cole Creek at Deihl Road, Houston, Tex. (12)

Location.--Lat 29°51'04", long 95°29'16", Harris County, on downstream side of bridge at Deihl Road in northwest Houston and 1.8 miles upstream from mouth.

Drainage area.--At Deihl Road, Apr. 14, 1964, to Apr. 1, 1965, 10.0 sq mi; Apr. 2 to May 17, 1965, 8.81 sq mi. At Antoine Drive, May 18 to Aug. 1, 1965, 9.94 sq mi; Aug. 2, 1965, to Sept. 1, 1966, 10.2 sq mi. At Deihl Road, Sept. 2, 1966, to Sept. 30, 1968, 8.81 sq mi. Drainage area changes caused by changes in storm sewers.

Gage.--Water-stage recorder. Datum of gage is mean sea level, datum of 1929, adjustment of 1957.

Remarks.--Station was established at Deihl Road and was temporarily relocated to Antoine Drive because of bridge construction and channel rectification. On Sept. 2, 1966, station was moved back to Deihl Road. Recording rain gage located at station.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1964	May 31, 1964	-	a400
1965	Feb. 16, 1965	78.23	338
1966	Apr. 14, 1966	c71.50	b950
1967	May 29, 1967	d71.84	160
1968	May 10, 1968	75.88	810

a Maximum for period April to September 1964.
b Estimated.
c Backwater from Whiteoak Bayou.
d Occurred Sept. 21, 1967, backwater from channel vegetation.

8-0742 Brickhouse Gully at Clarblak Street, Houston, Tex. (12)

Location.--Lat 29°49'53", long 95°31'42", Harris County, at bridge on Clarblak Street in northwest Houston.

Drainage area.--2.05 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1957.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Feb. 16, 1965	89.46	54
1966	Apr. 14, 1966	90.46	121
1967	Sept. 21, 1967	89.78	73
1968	May 10, 1968	92.58	328

8-0742.5 Brickhouse Gully at Costa Rica Street, Houston, Tex. (12)

Location.--Lat 29°49'40", long 95°28'09", Harris County, on right bank at downstream side of bridge at Costa Rica Street in northwest Houston, and 1.0 mile upstream from Whiteoak Bayou.

Drainage area.--10.4 sq mi. Prior to May 1965, 10.5 sq mi; May to August 1965, 10.7 sq mi; August 1965 to September 1967, 10.5 sq mi. Drainage area changes caused by changes in storm sewers.

Gage.--Water-stage recorder. Datum of gage is mean sea level, datum of 1929, adjustment of 1957.

Remarks.--Recording rain gage located at station.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1964	Aug. 23, 1964	a60.08	235
1965	Sept. 22, 1965	b64.60	550
1966	Apr. 14, 1966	64.87	1,040
1967	Sept. 21, 1967	59.45	323
1968	May 10, 1968	65.94	2,280

a Maximum for period August to September 1964.
b Backwater from construction dam.

8-0747.8 Keegans Bayou at Keegan Road near Houston, Tex. (12)

Location.--Lat 29°39'55", long 95°35'42", Harris County, at bridge on Keegan Road about 16 miles southwest of Houston.

Drainage area.--5.77 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1957.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Dec. 10, 1964	81.08	94
1966	Apr. 14, 1966	83.53	206
1967	Dec. 5, 1966	80.52	59
1968	June 24, 1968	83.23	192

8-0748 Keegans Bayou at Roark Road near Houston, Tex. (12)

Location.--Lat 29°39'23", long 95°33'43", Harris County, on left bank at downstream side of bridge on Roark Road and about 2.0 miles southwest of city limits of Houston.

Drainage area.--9.28 sq mi. Prior to Jan. 1, 1967, 9.66 sq mi, due to drainage ditch changes.

Gage.--Water-stage recorder. Datum of gage is mean sea level, datum of 1929 through 1957 adjustment.

Remarks.--Recording rain gage located at station.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Dec. 10, 1964	66.43	140
1966	Apr. 14, 1966	57.64	588
1967	Jan. 13-14, 1967	a64.83	43
1968	June 23, 1968	67.89	352

a Occurred Sept. 21, 1967, backwater from channel vegetation.

8-0748.5 Bintliff Ditch at Bissonnet Street, Houston, Tex. (12)

Location.--Lat 29°41'16", long 95°30'20", Harris County, at bridge on Bissonnet Street in southwest Houston.

Drainage area.--4.29 sq mi.

Gage.--Recording.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1968	Sept. 14, 1968	62.19	a1,030

a Maximum for period August to September; probably peak for year.

8-0749 Willow Waterhole Bayou at Landsdowne Street, Houston, Tex. (12)

Location.--Lat 29°39'01", long 95°29'11", Harris County, at bridge on Landsdowne Street in southwest Houston.

Drainage area.--11.2 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1957.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Dec. 10, 1964	56.88	350
1966	Apr. 14, 1966	60.00	1,300
1967	Aug. 25, 1967	57.90	450
1968	June 23, 1968	60.76	1,680

8-0753 Sims Bayou at Carlsbad Street, Houston, Tex. (12)

Location.--Lat 29°37'33", long 95°29'56", Harris County, at bridge on Carlsbad Street in southwest Houston.

Drainage area.--4.99 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1957.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	June 18, 1965	60.71	108
1966	Apr. 14, 1966	62.59	320
1967	Sept. 21, 1967	62.59	314
1968	June 23, 1968	63.45	470

8-0754 Sims Bayou at Hiram Clarke Street, Houston, Tex. (12)

Location.--Lat 29°37'07", long 95°26'45", Harris County, on right bank at downstream side of Hiram Clarke Street bridge in southwest section of Houston, 12.7 miles upstream from gage, Sims Bayou at Houston, and 19.7 miles upstream from mouth.

Drainage area.--20.2 sq mi.

Gage.--Water-stage recorder. Datum of gage is mean sea level, datum of 1929, adjustment of 1929.

Remarks.--Recording rain gage located at station.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1964	Sept. 17, 1964	a43.83	96
1965	Dec. 10, 1964	48.70	960
1966	Apr. 14, 1966	51.08	2,280
1967	Sept. 21, 1967	46.77	350
1968	June 23, 1968	52.35	2,200

a Maximum for period August to September 1964.

8-0755.5 Berry Bayou at Gilpin Street, Houston, Tex. (12)

Location.--Lat 29°38'32", long 95°13'22", Harris County, at bridge on Gilpin Street in southeast Houston.

Drainage area.--3.26 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustments of 1957 and 1959.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Dec. 10, 1964	34.76	290
1966	Feb. 9, 1966	34.48	607
1967	Apr. 13, 1967	31.83	235
1968	May 10, 1968	35.19	738

8-0756 Berry Bayou tributary at Globe Street, Houston, Tex. (12)

Location.--Lat 29°39'00", long 95°14'48", Harris County, at bridge on Globe Street in southeast Houston.

Drainage area.--1.58 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustments of 1957 and 1959.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Dec. 10, 1964	37.89	145
1966	Feb. 9, 1966	39.48	308
1967	Apr. 13, 1967	37.27	114
1968	June 22, 1968	39.03	254

SAN JACINTO RIVER BASIN

8-0757 Berry Creek at Galveston Road, Houston, Tex. (12)

Location.--Lat 29°40'59", long 95°15'11", Harris County, at bridge on Galveston Road and 0.5 mile upstream from mouth in southeast Houston.

Drainage area.--4.86 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustments of 1957 and 1959.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Dec. 10, 1964	17.57	280
1966	Apr. 14, 1966	20.47	607
1967	Apr. 13, 1967	16.66	286
1968	May 10, 1968	21.56	789

SAN JACINTO RIVER BASIN

8-0757.5 Hunting Bayou tributary at Cavalcade Street, Houston, Tex. (12)

Location.--Lat 29°48'00", long 95°20'02", Harris County, at bridge on Cavalcade Street in northeast Houston.

Drainage area.--1.03 sq mi.

Gage.--Recording.

Remarks.--

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Sept. 22, 1965	43.37	109
1966	Apr. 14, 1966	43.63	119
1967	Oct. 4, 1966	44.14	140
1968	May 10, 1968	44.38	149

8-0757.6 Hunting Bayou at Falls Street, Houston, Tex. (12)

Location.--Lat 29°48'22", long 95°19'50", Harris County, at bridge on Falls Street in northeast Houston.

Drainage area.--3.42 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustments of 1957 and 1959.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Sept. 22, 1965	41.95	236
1966	Apr. 14, 1966	40.64	485
1967	Oct. 4, 1966	42.46	399
1968	May 10, 1968	42.28	445

8-0757.7 Hunting Bayou at U.S. Highway 90-A, Houston, Tex. (12)

Location.--Lat 29°47'43", long 95°16'21", Harris County, on right bank 100 ft downstream from bridge on U.S. Highway 90-A, in northeast section of Houston, and 9.2 miles upstream from mouth.

Drainage area.--14.4 sq mi.

Gage.--Water-stage recorder. Datum of gage is mean sea level, datum of 1929, adjustment of 1959.

Topographic characteristics.--Length of main stream, 7.1 miles; slope index, 1.1 ft per mile. (Map scale, 1:24,000).

Remarks.--Recording rain gage located at station.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1964	Apr. 17, 1964	a24.39	166
1965	Dec. 10, 1964	26.60	355
1966	Apr. 14, 1966	31.43	1,150
1967	Oct. 5, 1966	30.44	920
1968	May 10, 1968	32.66	1,460

a Maximum for period April to September 1964.

8-0757.8 Green Bayou at Cutten Road near Houston, Tex. (12)

Location.--Lat 29°56'56", long 95°31'10", Harris County, at bridge on Cutten Road and about 16.5 miles northwest of Houston.

Drainage area.--8.73 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustments of 1957 and 1959.

Remarks.--Urbanizing.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Feb. 16, 1965	115.27	151
1966	Apr. 14, 1966	117.63	514
1967	Sept. 21, 1967	118.30	468
1968	ǂMay 12, 1968	117.15	ǂ390

ǂ Revised.

8-0762 Halls Bayou at Deertrail Street, Houston, Tex. (12)

Location.--Lat 29°54'07", long 95°25'21", Harris County, at bridge on Deertrail Street, 0.6 mile west of U.S. Highway 75, and about 11 miles northwest of Houston.

Drainage area.--6.31 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1961.

Remarks.--Urbanizing.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Sept. 22, 1965	81.33	130
1966	Apr. 14, 1966	83.52	614
1967	Sept. 21, 1967	85.22	710
1968	May 10, 1968	82.65	318

8-0765 Halls Bayou at Houston, Tex. (12)

Location.--Lat 29°51'42", long 95°20'05", Harris County, on right bank at downstream side of bridge on Jensen Drive in northeast section of Houston, and 11.0 miles upstream from mouth.

Drainage area.--24.7 sq mi.

Gage.--Recording. Datum of gage is 0.66 ft below mean sea level, datum of 1929, adjustment of 1957.

Remarks.--Channel was rectified in June 1956.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1953	May 18, 1953	59.05	2,410
1954	July 30, 1954	60.65	2,020
1955	Feb. 6, 1955	56.62	1,530
1956	Jan. 22, 1956	51.53	357
1957	Apr. 29, 1957	52.51	620
1958	Oct. 15, 1957	57.09	1,280
1959	May 23, 1959	58.10	1,980
1960	June 26, 1960	58.79	2,230
1961	Sept. 12, 1961	60.50	3,400
1962	Nov. 13, 1961	58.28	2,540
1963	Nov. 27, 1962	57.02	1,870
1964	May 31, 1964	55.27	1,470
1965	Sept. 22, 1965	55.02	1,250
1966	Apr. 14, 1966	58.93	2,640
1967	Sept. 21, 1967	57.65	1,110
1968	May 10, 1968	58.26	2,340

8-0771 Clear Creek tributary at Hall Road, Houston, Tex. (12)

Location.--Lat 29°36'09", long 95°16'41", Harris County, at bridge on Hall Road in south Houston.

Drainage area.--1.33 sq mi. Prior to Oct. 1, 1966, 1.27 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1957 and 1959.

Remarks.--Urbanizing.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Dec. 10, 1964	a42.73	e100
1966	Feb. 9, 1966	b44.91	e150
1967	Apr. 13, 1967	c41.38	132
1968	May 10, 1968	d44.91	390

a Occurred at different time than peak discharge, backwater from Clear Creek.
b Occurred May 21, 1966, backwater from Clear Creek.
c Occurred Oct. 4, 1966, backwater from vegetation in channel.
d Occurred May 11, 1968, backwater from Clear Creek.
e Estimated.

CLEAR CREEK BASIN

8-0775.5 Cowart Creek near Friendswood, Tex. (12)

Location.--Lat 29°30'46", long 95°13'21", Brazoria County, at downstream side of bridge on county road and 1.7 miles southwest of Friendswood.

Drainage area.--18.0 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 8.05 miles; slope index, 5 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	a<11.70	<130
1966	Apr. 14, 1966	18.74	948
1967	Feb. 6, 1967	14.27	307
1968	June 21, 1968	21.02	1,280

a Maximum for period Aug. 25 to Sept. 30, 1965.
< Less than amount shown.

BRAZOS RIVER BASIN

8-0794 Playa Draw at Littlefield, Tex. (05)

Location.--Lat 33°55'00", long 102°21'16", Lamb County, at culvert on U.S. Highway 84 and 0.5 mile west of Littlefield.

Drainage area.--0.63 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.4 miles; slope index, 28 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Aug. 5, 1967	a1.89	44
1968	June 8, 1968	2.08	59

a Maximum for period Dec. 6, 1966, to Sept. 30, 1967.

8-0795.7 Barnum Springs Draw near Post, Tex. (05)

Location.--Lat 33°16'54", long 101°23'30", Garza County, at culvert on Farm Road 122 and 6.4 miles north of Post.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 10, 1966	3.55	58
1967	Mar. 23, 1967	3.65	63
1968	May 31, 1968	8.40	435

8-0795.8 Rattlesnake Creek near Post, Tex. (05)

Location.--Lat 33°13'36", long 101°21'36", Garza County, at culvert on Farm Road 651 and 2.7 miles north of Post.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 31, 1966	4.58	196
1967	June 27, 1967	5.88	295
1968	June 8, 1968	3.62	106

8-0805.1 Guest-Flowers Draw near Aspermont, Tex. (08)

Location.--Lat 33°07'25", long 100°08'15", Stonewall County, at culvert on U.S. Highway 380, 0.2 mile upstream from Tonk Creek, and 5.3 miles east of Aspermont.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	June 21, 1965	a17.85	155
1966	Aug. 31, 1966	17.25	80
1967	June 9, 1967	19.57	410
1968	-	<16.75	<30

a Maximum for period June 4 to Sept. 30, 1965.
< Less than amount shown.

8-0807.5 Callahan Draw near Lockney, Tex. (05)

Location.--Lat 33°59'48", long 101°32'54", Floyd County, at culvert on Farm Road 784, 7 miles upstream from Running Water Draw, and 10.5 miles northwest of Lockney.

Drainage area.--37.5 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 24, 1966	3.01	106
1967	May 31, 1967	3.69	185
1968	May 9, 1968	2.95	100

BRAZOS RIVER BASIN

8-0809.18 Red Mud Creek near Spur, Tex. (25)

Location.--Lat 33°19'24", long 100°55'18", Dickens County, at culvert on Farm Road 1081 and 11 miles southwest of Spur.

Drainage area.--65.1 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 23 miles; slope index, 16.1 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 24, 1966	15.14	4,340
1967	July 4, 1967	11.70	1,850
1968	June 16, 1968	14.13	2,900

BRAZOS RIVER BASIN

8-0829 North Elm Creek near Throckmorton, Tex. (03)

Location.--Lat 33°10'50", long 99°22'05", Throckmorton County, at culvert on State Highway 24 and 11.3 miles west of Throckmorton.

Drainage area.--3.58 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.0 miles; slope index, 36.4 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	-	a0
1966	Apr. 30, 1966	26.28	1,350
1967	-	<22.84	<160
1968	May 12, 1968	23.21	264

a No flow for period June 3 to Sept. 30, 1965.
< Less than amount shown.

8-0853 Humphries Draw near Haskell, Tex. (08)

Location.--Lat 33°10'40", long 99°34'30", Haskell County, at culvert on State Highway 24 and 9.3 miles east of Haskell.

Drainage area.--3.53 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.27 miles; slope index, 21.8 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 19, 1965	a14.38	(+)
1966	Aug. 25, 1966	16.31	820
1967	July 20, 1967	17.29	1,150
1968	Jan. 21, 1968	17.65	1,250

a Maximum for period June 3 to Sept. 30, 1965.
+ Discharge not determined.

8-0862.6 Pecan Creek near Eolian, Tex. (23)

Location (revised).--Lat 32°35'01", long 99°01'57", Stephens County, at county road crossing 1.4 miles east of Farm Road 1853, 3.3 miles upstream from Battle Creek, and 5.8 miles south of Eolian.

Drainage area.--25.4 sq mi.

Gage.--Recording. Altitude of gage is 1,274 ft, from AMS topographic map.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	July 19, 1967	5.85	335
1968	Apr. 18, 1958	11.26	580

8-0881 Salt Creek at Olney, Tex. (03)

Location.--Lat 33°22'15", long 98°44'30", Young County, on right bank 21 ft downstream from bridge on State Highway 199 and 0.5 mile east of Olney.

Drainage area.--9.6 sq mi.

Gage.--Recording. Datum of gage is 1,164.03 ft above mean sea level, datum of 1929.

Historical data.--Maximum stage since at least 1908, 16.7 ft in June 1915, from information by local residents.

Remarks.--Rain gage at site.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1958	Sept. 16, 1958	8.18	345
1959	June 22, 1959	7.30	264
1960	Oct. 3, 1959	10.16	1,040
1961	Sept. 12, 1961	5.95	162
1962	Nov. 22, 1961	9.66	485
1963	Nov. 26, 1962	9.32	360
1964	May 29, 1964	10.05	498
1965	May 10, 1965	6.62	148
1966	Apr. 29, 1966	12.14	11,500
1967	Sept. 18, 1967	9.74	625
1968	Jan. 21, 1968	8.83	273

8-0883 Briar Creek near Graham, Tex. (03)

Location.--Lat 33°12'40", long 98°37'05", Young County, on downstream side of bridge on Farm Road 1769, 2.5 miles upstream from mouth, and 7.0 miles northwest of Graham.

Drainage area.--19.7 sq mi.

Gage.--Recording.

Historical data.--Maximum stage since at least 1900, 15.2 ft in September 1955; flood in May 1957 reached a stage of 15.0 ft, from information by local residents.

Remarks.--

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1959	June 23, 1959	4.08	207
1960	Oct. 3, 1959	9.02	649
1961	Oct. 18, 1960	8.42	555
1962	June 10, 1962	10.50	ǂ750
1963	Apr. 27, 1963	5.10	ǂ268
1964	May 30, 1964	6.47	ǂ390
1965	Nov. 19, 1964	7.14	444
1966	Apr. 23, 1966	11.42	723
1967	July 19, 1967	8.62	516
1968	Mar. 13, 1968	4.50	220

ǂ Revised.

8-0891 Elm Creek tributary near Graford, Tex. (02)

Location.--Lat 32°54'35", long 98°17'35", Palo Pinto County, at culvert on Farm Road 4, 0.2 mile upstream from Elm Creek, and 3.2 miles southwest of Graford.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	-	a0
1966	Apr. 30, 1966	12.71	40
1967	May 20, 1967	12.21	33
1968	Mar. 20, 1968	11.15	16

a No flow for period June 22 to Sept. 30, 1965.

8-0908.5 Cidwell Branch near Granbury, Tex. (02)

Location.--Lat 32°35'41", long 97°46'24", Hood County, at culvert on State Highway 51 and 10.5 miles north of Granbury.

Drainage area.--3.37 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.65 miles; slope index, 49 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 29, 1966	16.65	540
1967	-	<11.16	<37
1968	May 10, 1968	14.44	290

< Less than amount shown.

8-0912 Morris Branch near Bluff Dale, Tex. (02)

Location.--Lat 32°21'25", long 98°00'00", Erath County, at culvert on U.S. Highway 377 and 1.2 miles east of Bluff Dale.

Drainage area.--0.06 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.23 mile; slope index, 382 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	a<11.44	<25
1966	Apr. 29, 1966	13.71	107
1967	May 11, 1967	11.76	35
1968	Aug. 14, 1968	12.54	61

a Maximum for period June 10 to Sept. 30, 1965.
< Less than amount shown.

8-0917 Panter Branch near Tolar, Tex. (02)

Location.--Lat 32°20'59", long 97°51'25", Hood County, at culvert on State Highway 51, 2.5 miles upstream from mouth, and 4.6 miles southeast of Tolar.

Drainage area.--7.82 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.0 miles; slope index, 49 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 29, 1966	14.49	880
1967	May 20, 1967	16.9	1,650
1968	May 9, 1968	21.70	3,800

8-0932 Bond Branch near Hillsboro, Tex. (09)

Location.--Lat 32°02'20", long 97°06'30", Hill County, at culvert on U.S. Highway 77 and 2.3 miles northeast of Hillsboro.

Drainage area.--0.36 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.85 mile; slope index, 70.6 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	June 24, 1965	14.19	305
1966	Apr. 25, 1966	14.00	285
1967	May 1, 1967	11.0	34
1968	May 9, 1968	15.91	505

8-0934 Cobb Creek near Abbott, Tex. (09)

Location (revised).--Lat 31°55'11", long 97°05'57", Hill County, at downstream side of bridge on service road on downstream side of Interstate Highway 35, 1.5 miles downstream from Missouri, Kansas and Texas Railway Co. bridge, 2.8 miles northwest of Abbott, and 9 miles upstream from mouth.

Drainage area.--11.7 sq mi.

Gage.--Recording. Datum of gage is 575.00 ft above mean sea level, datum of 1929.

Topographic characteristics.--Length of main stream, 10.7 miles; slope index, 20.7 ft per mile. (Map scale, 1:24,000).

Remarks.--Maximum stage since at least 1932, 11.1 ft, date unknown, from information by Texas Highway Department.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	May 31, 1967	7.85	785
1968	May 9, 1968	10.50	2,720

8-0940 Green Creek subwatershed No. 1 near Dublin, Tex. (02)

Location (revised).--Lat 32°09'57", long 98°20'28", Erath County, near center of dam on main headwater channel of Green Creek, 0.9 mile downstream from county road, 1.3 miles east of Farm Road 219, and 5.5 miles north of Dublin.

Drainage area (revised).--3.34 sq mi.

Gage.--Recording. Datum of gage is 1,408.00 ft above mean sea level, datum of 1929 (levels by U.S. Soil Conservation Service).

Remarks.--Peaks are based on maximum inflow (average for 5 or 15-minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. No adjustment made for reservoir losses. One recording rain gage is located in the watershed above the station. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1955	May 18, 1955	≠3,630
1956	≠May 1, 1956	≠11,500
1957	Apr. 26, 1957	887
1958	July 22, 1958	≠748
1959	June 26, 1959	≠498
1960	Oct. 3, 1959	≠1,540
1961	July 9, 1961	≠261
1962	Sept. 7, 1962	≠516
1963	Apr. 28, 1963	≠621
1964	Sept. 21, 1964	2,090
1965	May 15, 1965	365
1966	Apr. 30, 1966	645
1967	Sept. 14, 1967	102
1968	May 12, 1968	3,540

≠ Revised.

8-0952.2 South Bosque River near McGregor, Tex. (09)

Location.--Lat 31°23'22", long 97°22'54", McLennan County, on downstream side of bridge on State Highway 317 and 3.8 miles south of McGregor.

Drainage area.--15.9 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 6.14 miles; slope index, 28.4 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Apr. 22, 1967	2.73	178
1968	May 10, 1968	9.56	(+)

+ Discharge not determined.

8-0952.5 Willow Branch at McGregor, Tex. (09)

Location.--Lat 31°26'25", long 97°25'15", McLennan County, at culvert on U.S. Highway 84 and on west edge of McGregor.

Drainage area.--2.52 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.55 miles; slope index, 19.4 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Sept. 18, 1966	a5.54	367
1967	Apr. 22, 1967	4.90	238
1968	July 8, 1968	5.39	337

a Maximum for period July to September 1966.

8-0965.5 Box Branch at Robinson, Tex. (09)

Location.--Lat 31°29'35", long 97°08'45", McLennan County, at culvert on Loop 340 in Robinson and 4.9 miles south of Waco.

Drainage area.--0.40 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.80 mile; slope index, 60 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	-	a0
1966	May 1, 1966	12.90	460
1967	-	<9.78	<20
1968	June 24, 1968	10.93	150

a No flow for period August to September 1965.
< Less than amount shown.

8-0968 Cow Bayou subwatershed No. 4 near Bruceville, Tex. (09)

Location.--Lat 31°20'10", long 97°15'50", McLennan County, near center of dam on Foster Branch, 1.0 mile upstream from South Fork Cow Bayou, and 2.1 miles west of Bruceville.

Drainage area.--5.25 sq mi.

Gage.--Recording. Datum of gage is 574.46 ft above mean sea level, datum of 1929 (levels by U.S. Soil Conservation Service).

Remarks.--Peak discharge based on maximum inflow (average for 5 or 15-minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. Recording rain gage located at station. Tabulations of significant storm rainfall and runoff are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1957	May 11, 1957	6,900
1958	Oct. 14, 1957	1,510
1959	June 23, 1959	1,690
1960	Oct. 4, 1959	1,400
1961	June 8, 1961	628
1962	June 30, 1962	293
1963	Oct. 26, 1962	19
1964	June 16, 1964	151
1965	May 16, 1965	1,780
1966	Feb. 9, 1966	1,830
1967	Sept. 17, 1967	36
1968	May 10, 1968	2,340

8-0983 Little Pond Creek at Burlington, Tex. (17)

Location.--Lat 31°01'35", long 96°59'17", Milam County, on left bank 80 ft downstream from bridge on U.S. Highway 77, 1 mile north of Burlington, and 2.5 miles downstream from Keys Creek.

Drainage area.--22.2 sq mi.

Gage.--Water-stage recorder. Datum of gage is 388.51 ft above mean sea level, datum of 1929.

Historical data.--Maximum stage since at least 1938, 17.5 ft in 1950, from information by local residents.

Remarks.--Three recording rain gages are located in the watershed. Data from these gages are on file in the U.S. Geological Survey Austin Field Unit office.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1963	Nov. 27, 1962	7.50	418
1964	Sept. 24, 1964	10.09	745
1965	May 16, 1965	15.61	5,980
1966	Apr. 25, 1966	13.02	2,550
1967	May 1, 1967	9.82	748
1968	May 10, 1968	a14.60	4,250

a Occurred June 24, 1968.

8-0993.5 Sabana River tributary near De Leon, Tex. (23)

Location.--Lat 32°06'44", long 98°33'58", Comanche County, 13 ft upstream from culvert on Farm Road 587 and 1.6 miles west of De Leon.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 29, 1966	a7.56	51
1967	Sept. 21, 1967	7.97	68
1968	Jan. 20, 1968	7.22	41

a Maximum for period February to September 1966.

8-1001 Eidson Creek near Hamilton, Tex. (09)

Location.--Lat 31°46'10", long 98°07'25", Hamilton County, at culvert on U.S. Highway 281 and 4.6 miles north of Hamilton.

Drainage area.--2.91 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 4.03 miles; slope index, 55 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	-	a0
1966	Oct. 18, 1965	10.06	150
1967	June 12, 1967	10.00	138
1968	May 27, 1968	12.63	900

a No flow for period August to September 1965.

8-1004 Bermuda Branch near Gatesville, Tex. (09)

Location.--Lat 31°32'26", long 97°47'53", Coryell County, at culvert on State Highway 36 and 8.0 miles northwest of Gatesville.

Drainage area.--0.50 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.17 miles; slope index, 168 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	-	-	a0
1967	-	<4.62	<3.5
1968	Jan. 21, 1968	4.6	3.5

a No flow for period July to September 1966.
< Less than amount shown.

8-1008 Hoffman Branch near Hamilton, Tex. (09)

Location.--Lat 31°35'01", long 98°11'45", Hamilton County, at culvert on Farm Road 2414 and 9.3 miles southwest of Hamilton.

Drainage area.--5.56 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.50 miles; slope index, 49 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Sept. 18, 1966	11.71	a50
1967	July 1, 1967	5.59	17
1968	Jan. 21, 1968	9.19	620

a Discharge estimated, culvert was partially plugged with debris.

8-1029 School Branch near Lampasas, Tex. (23)

Location.--Lat 31°13'48", long 98°09'25", Lampasas County, at culvert on Farm Road 1690 and 11.5 miles north of Lampasas.

Drainage area.--0.90 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.95 mile; slope index, 58 ft per mile. (Map scale, 1:24,000)

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 12, 1966	a5.36	83
1967	May 1, 1967	4.88	53
1968	May 25, 1968	5.40	88

a Maximum for period July to September 1966.

8-1034.5 Fleece Branch near Lampasas, Tex. (23)

Location.--Lat 31°05'46", long 98°12'30", Lampasas County, at culvert on U.S. Highways 183 and 190, 0.7 mile upstream from Burleson Creek, and 2.8 miles northwest of Lampasas.

Drainage area.--1.08 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.00 miles; slope index, 100 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	-	a0
1966	June 19, 1966	15.18	980
1967	-	<9.81	<60
1968	July 8, 1968	10.17	101

a No flow for period August to September 1965.
< Less than amount shown.

8-1048.5 South Fork San Gabriel River near Bertram, Tex. (14)

Location.--Lat 30°43'14", long 98°06'15", Burnet County, on downstream side of bridge on Farm Road 243 and 3.4 miles southwest of Bertram.

Drainage area.--8.84 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.8 miles; slope index, 40 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	May 1, 1967	3.93	(+)
1968	May 17, 1968	12.14	(+)

+ Discharge not determined.

8-1059 Avery Branch near Taylor, Tex. (14)

Location.--Lat 30°29'11", long 97°27'27", Williamson County, at culvert on Farm Road 973 and 6.4 miles southwest of Taylor.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Sept. 27, 1966	a6.20	280
1967	May 2, 1967	7.21	595
1968	Nov. 10, 1967	7.03	535

a Maximum for period July to September 1966.

8-1088 Little Branch near Bryan, Tex. (17)

Location.--Lat 30°45'14", long 96°28'01", Robertson County, at culvert on U.S. Highway 190 and State Highway 6 and 8.3 miles northwest of Bryan.

Drainage area.--0.14 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.43 mile; slope index, 108 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	-	a0
1966	May 1, 1966	13.33	99
1967	Oct. 14, 1966	13.03	87
1968	July 9, 1968	13.08	88

a No flow for period August to September 1965.

8-1103.5 Plummers Creek at Mexia, Tex. (09)

Location.--Lat 31°40', long 96°30', Limestone County, at culvert on State Highway 14 and at southwest city limits of Mexia.

Drainage area.--4.42 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.2 miles; slope index, 14.8 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	-	a0
1966	Apr. 18, 1966	15.34	2,000
1967	Sept. 7, 1967	11.65	570
1968	May 10, 1968	14.92	1,830

a No flow for period August to September 1965.

8-1110.25 Burton Creek at Villa Maria Road, Bryan, Tex. (17)

Location.--Lat 30°38'48", long 96°20'57", Brazos County, on left bank 60 ft downstream from culvert on Villa Maria Road at Bryan and 2.8 miles upstream from Carters Creek.

Drainage area.--1.33 sq mi.

Gage.--Recording. Datum of gage is 281.23 ft above mean sea level, datum of 1929.

Remarks.--Urban. Two recording rain gages are located in the watershed.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1968	June 24, 1968	a8.33	466

a Maximum for period April to September 1968

8-1110.5 Hudson Creek near Bryan, Tex. (17)

Location.--Lat 30°39'38", long 96°17'59", Brazos County, on left bank 5 ft upstream from culvert on Farm Road 158 and 4.3 miles east of Bryan.

Drainage area.--1.94 sq mi.

Gage.--Recording. Datum of gage is 269.2 ft above mean sea level (Texas Highway Department bridge plans).

Historical data.--Maximum stage since at least 1879, that of July 9, 1968.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1968	July 9, 1968	10.85	828

BRAZOS RIVER BASIN

8-1111 Winkleman Creek near Brenham, Tex. (17)

Location.--Lat 30°15'19", long 96°15'44", Washington County, at culvert on State Highway 90 and 10.7 miles northeast of Brenham.

Drainage area.--0.75 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.28 miles; slope index, 48 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	-	a0
1966	Feb. 27, 1966	10.53	95
1967	-	<9.81	<30
1968	July 9, 1968	13.27	500

a No flow for period August to September 1965.
< Less than amount shown.

BRAZOS RIVER BASIN

8-1149 Seabourne Creek near Rosenberg, Tex. (12)

Location.--Lat 29°31'27", long 95°48'29", Fort Bend County, at culvert on State Highway 36 and 2.4 miles south of Rosenberg.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Sept. 9, 1966	a4.92	310
1967	Aug. 25, 1967	4.82	≠160
1968	June 23, 1968	6.21	295

a Maximum for period Aug. 12 to Sept. 30, 1966.
≠ Revised.

8-1164 Dry Creek near Rosenberg, Tex. (12)

Location.--Lat 29°30'42", long 95°44'45", Fort Bend County, on right bank, 38 ft downstream from county road bridge, 5.0 miles southeast of Rosenberg, and 8.2 miles upstream from Smithers Lake spillway.

Drainage area.--8.53 sq mi.

Gage.--Recording. Datum of gage is 71.90 ft above mean sea level, datum of 1929, supplementary adjustment of 1943.

Historical data.--Highest flood since at least 1932, Oct. 31, 1959, from information by local residents.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1959	Apr. 11, 1959	8.00	504
1960	Oct. 31, 1959	12.66	2,410
1961	June 19, 1961	11.13	1,120
1962	Nov. 13, 1961	6.88	348
1963	Jan. 17, 1963	9.83	762
1964	Mar. 19, 1964	8.13	386
1965	Feb. 16, 1965	10.30	860
1966	Apr. 14, 1966	10.96	900
1967	Aug. 25, 1967	6.56	338
1968	June 24, 1968	10.30	860

8-1178 Mound Creek tributary at Guy, Tex. (12)

Location.--Lat 29°20'49", long 95°46'30", Fort Bend County, at culvert on State Highway 36 and 0.2 mile southeast of Guy.

Drainage area.--1.48 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.80 miles; slope index, 3.3 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	-	a<1.58	(+)
1967	-	<1.58	(+)
1968	-	<1.58	(+)

a Maximum for period July 12 to Sept. 30, 1966.
+ Discharge not determined.
< Less than amount shown.

COLORADO RIVER BASIN

8-1236.2 Sulphur Springs Draw near Wellman, Tex. (05)

Location.--Lat 33°04'36", long 102°27'54", Terry County, at culvert on Farm Road 402 and 3 miles northwest of Wellman.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 24, 1966	7.41	240
1967	June 25, 1967	4.01	102
1968	July 1, 1968	3.32	69

COLORADO RIVER BASIN

8-1237.5 Coahoma Draw tributary near Big Spring, Tex. (08)

Location.--Lat 32°21'17", long 101°24'18", Howard County, at culvert on State Highway 350 and 8.5 miles northeast of Big Spring.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 21, 1965	a4.05	265
1966	Apr. 30, 1966	3.47	185
1967	July 20, 1967	5.54	480
1968	June 15, 1968	4.47	328

a Maximum for period June to September 1965.

COLORADO RIVER BASIN

8-1237.6 Bull Creek tributary near Forsan, Tex. (08)

Location.--Lat 32°08'23", long 101°10'53", Howard County, at culvert on Farm Road 2183 and 11.4 miles east of Forsan.

Drainage area.--0.40 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.9 mile; slope index, 128 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 30, 1966	a8.23	140
1967	-	-	0
1968	-	<6.02	<25

a Maximum for period February to September 1966.
< Less than amount shown.

COLORADO RIVER BASIN

8-1239.2 Bitter Creek near Silver, Tex. (07)

Location.--Lat 31°58'48", long 100°42'52", Coke County, at culvert on Farm Road 2059, 2.5 miles upstream from mouth, and 6.4 miles south of Silver.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	July 19, 1967	3.24	98
1968	May 10, 1968	6.42	370

8-1263 Fish Creek tributary near Hylton, Tex. (08)

Location.--Lat 32°07'57", long 100°14'02", Nolan County, at culvert on Farm Road 1170 and 1.8 miles west of Hylton.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.7 mile; slope index, 147 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 30, 1966	a5.14	36
1967	July 19, 1967	8.18	155
1968	Aug. 14, 1968	7.41	120

a Maximum for period February to September 1966.

8-1271 Dry Creek near Christoval, Tex. (07)

Location.--Lat 31°05'21", long 100°20'56", Tom Green County, at culvert on Farm Road 2084 and 11.4 miles southeast of Christoval.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Aug. 12, 1965	a1.77	<200
1966	Sept. 18, 1966	3.64	285
1967	July 20, 1967	4.64	470
1968	-	<1.41	<200

a Maximum for period June to September 1965.
< Less than amount shown.

8-1333 Quarry Creek near Sterling City, Tex. (07)

Location.--Lat 31°50'48", long 101°09'18", Sterling County, at culvert on State Highway 158 and 9.8 miles west of Sterling City.

Drainage area.--3.25 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.0 miles; slope index, 95 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 18, 1965	a4.73	170
1966	Oct. 17, 1965	4.81	190
1967	June 2, 1967	4.83	195
1968	May 10, 1968	4.57	130

a Maximum for period June to September 1965.

8-1338 Broome Creek near Broome, Tex. (07)

Location.--Lat 31°46'05", long 100°51'09", Sterling County, at culvert on U.S. Highway 87 and 1.1 miles northwest of Broome.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 18, 1965	a2.81	150
1966	Oct. 17, 1965	2.87	160
1967	Mar. 20, 1967	2.60	115
1968	-	<2.37	<84

a Maximum for period June to September 1965.
< Less than amount shown.

8-1343 Nolke Station Creek near San Angelo, Tex. (07)

Location.--Lat 31°31'34", long 100°33'46", Tom Green County, at culvert on Farm Road 2288 and 8.6 miles northwest of San Angelo.

Drainage area.--0.59 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.72 miles; slope index, 67 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	May 17, 1965	7.58	281
1966	Apr. 30, 1966	6.16	170
1967	Mar. 22, 1967	3.89	42
1968	-	<2.74	<20

< Less than amount shown.

8-1344 Gravel Pit Creek near San Angelo, Tex. (07)

Location.--Lat 31°27'54", long 100°31'17", Tom Green County, at culvert on Farm Road 2288 and 5.0 miles west of San Angelo.

Drainage area.--0.19 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.55 mile; slope index, 80 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	June 4, 1965	a2.09	24
1966	Aug. 24, 1966	2.79	41
1967	Sept. 4, 1967	2.15	25
1968	Apr. 10, 1968	1.63	15

a Maximum for period May to September 1965.

8-1362 Puddle Creek near Veribest, Tex. (07)

Location.--Lat 31°30'38", long 100°09'31", Tom Green County, at culvert on Farm Road 1692 and 6.2 miles northeast of Veribest.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	July 31, 1966	a5.70	72
1967	July 19, 1967	5.46	50
1968	May 9, 1968	5.11	<50

a Maximum for period February to September 1966.
< Less than amount shown.

8-1363 Frog Pond Creek near Eden, Tex. (07)

Location.--Lat 31°14'21", long 99°59'54", Concho County, at culvert on U.S. Highway 87 and 9.4 miles west of Eden.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Aug. 17, 1967	3.69	318
1968	Apr. 9, 1968	2.52	86

8-1369 Mukewater Creek subwatershed No. 10A near Trickham, Tex. (23)

Location.--Lat 31°39'01", long 99°13'30", Coleman County, near center of dam on Mukewater Creek, 1.8 miles upstream from East Fork, and 4.3 miles north of Trickham.

Drainage area.--21.8 sq mi.

Gage.--Recording. Datum of gage is 1,462.00 ft above mean sea level, datum of 1929.

Remarks.--Peak discharge based on maximum inflow (average for 5-minute interval), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. There are eight rain gages (two recording and six nonrecording) located in watershed. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1966	Sept. 9, 1966	806
1967	Sept. 15, 1967	1,300
1968	Mar. 20, 1968	1,540

8-1370 Mukewater Creek subwatershed No. 9 near Trickham, Tex. (23)

Location.--Lat 31°41'40", long 99°12'18", Coleman County, near center of dam on tributary to East Fork Mukewater Creek, 1.5 miles upstream from mouth, 4.5 miles southwest of Bangs, and 7.1 miles north of Trickham.

Drainage area.--4.02 sq mi.

Gage.--Recording. Datum of gage is 1,500.01 ft above mean sea level, datum of 1929.

Topographic characteristics.--Length of main stream, 3.6 miles; slope index, 20.4 ft per mile. (Map scale, 1:24,000).

Remarks.--Peak discharge based on maximum inflow (average for 5 or 15-minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. Recording rain gage located at station. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1961	June 5, 1961	a1,440
1962	Oct. 9, 1961	44
1963	May 22, 1963	186
1964	Apr. 23, 1964	1,170
1965	Nov. 17, 1964	838
1966	Nov. 8, 1965	267
1967	Sept. 15, 1967	b380
1968	Mar. 20, 1968	853

a Maximum for period January to September 1961.
b Estimated.

8-1390 Deep Creek subwatershed No. 3 near Placid, Tex. (23)

Location.--Lat 31°17'10", long 99°09'25", McCulloch County, near right of dam on tributary to Deep Creek and 2.8 miles southeast of Placid.

Drainage area.--3.42 sq mi.

Gage.--Water-stage recorder. Datum of gage is 1,500.00 ft above mean sea level, datum of 1929. Prior to Dec. 1, 1953, staff gage at same site and datum.

Remarks.--Peak discharge based on maximum inflow (average for 5 or 15-minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. Recording rain gage located at station. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1954	Oct. 4, 1953	742
1955	May 18, 1955	1,800
1956	Aug. 28, 1956	218
1957	May 12, 1957	1,160
1958	Mar. 6, 1958	448
1959	June 3, 1959	938
1960	Oct. 4, 1959	a280
1961	June 5, 1961	235
1962	June 26, 1962	154
1963	May 30, 1963	208
1964	Sept. 27, 1964	681
1965	Feb. 8, 1965	322
1966	Sept. 15, 1966	280
1967	May 20, 1967	203
1968	Jan. 20, 1968	315

a Estimated.

8-1400 Deep Creek subwatershed No. 8 (Dry Prong Deep Creek) near Mercury, Tex. (23)

Location.--Lat 31°23'05", long 99°08'30", McCulloch County, near center of dam on Dry Prong Deep Creek, 1.9 miles southeast of Mercury, and 3.5 miles upstream from mouth.

Drainage area (revised).--5.41 sq mi.

Gage.--Recording. Datum of gage is 1,377.13 ft above mean sea level, datum of 1929 (levels by Soil Conservation Service).

Remarks.--Peak discharges based on maximum inflow (average for 5 to 30-minute intervals) computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. Recording rain gage located at station. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1952	Apr. 18, 1952	ab500
1953	May 12, 1953	ab900
1954	Oct. 4, 1953	1,570
1955	May 17, 1955	2,550
1956	Aug. 28, 1956	557
1957	May 12, 1957	894
1958	Nov. 2, 1957	521
1959	June 3, 1959	332
1960	Oct. 3, 1959	a323
1961	Dec. 7, 1960	217
1962	Nov. 2, 1961	b100
1963	May 5, 1963	408
1964	Sept. 21, 1964	5,660
1965	May 16, 1965	241
1966	Sept. 18, 1966	90
1967	Sept. 16, 1967	687
1968	Jan. 20, 1968	b200

a Unadjusted for rainfall on water surface.
b Estimated.

8-1405 Dry Prong Deep Creek near Mercury, Tex. (23)

Location.--Lat 31°24'10", long 99°08'10", McCulloch County, near center of span on downstream side of bridge on Farm Road 502, 1.3 miles southeast of Mercury, 1.7 miles downstream from floodwater-retarding structure, and 1.8 miles upstream from mouth.

Drainage area.--8.31 sq mi.

Gage.--Recording. Datum of gage is 1,339.02 ft above mean sea level, datum of 1929.

Historical data.--Flood of May 17, 1955, is the highest since at least 1924, from information by local resident.

Remarks.--In December 1951, one floodwater-retarding structure was built on the creek at a site 1.7 miles upstream from this station. This structure has a total floodwater-retarding capacity of 1,410 acre-ft below flood-spillway crest, and partly controls the flow from 4.32 sq mi above this station. Two recording rain gages are located in the watershed above the station. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1938	July 23, 1938	8.7	-
1952	Apr. 18, 1952	5.80	105
1953	May 12, 1953	5.30	293
1954	Oct. 4, 1953	7.94	776
1955	May 17, 1955	9.00	2,000
1956	May 1, 1956	7.20	960
1957	May 12, 1957	6.46	664
1958	Nov. 2, 1957	4.85	253
1959	June 4, 1959	4.95	274
1960	Oct. 3, 1959	4.65	226
1961	Feb. 5, 1961	3.91	129
1962	Oct. 9, 1961	4.32	182
1963	May 5, 1963	5.72	425
1964	Sept. 21, 1964	9.00	1,970
1965	Feb. 8, 1965	4.09	144
1966	Sept. 15, 1966	4.85	258
1967	Sept. 16, 1967	6.70	729
1968	Jan. 20, 1968	4.85	247

8-1411 McCall Branch near Coleman, Tex. (23)

Location.--Lat 31°50'57", long 99°33'12", Coleman County, at culvert on State Highway 53, 1 mile upstream from Hords Creek, and 8.2 miles west of Coleman.

Drainage area.--2.17 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.33 miles; slope index, 54.3 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	June 18, 1966	a4.78	440
1967	Sept. 15, 1967	3.97	230
1968	Jan. 20, 1968	5.24	710

a Maximum for period March to September 1966.

8-1437 Browns Creek tributary near Goldthwaite, Tex. (23)

Location.--Lat 31°31'01", long 98°34'00", Mills County, at culvert on State Highway 16 and 4.6 miles north of Goldthwaite.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 29, 1966	a4.48	230
1967	-	<3.36	<20
1968	May 10, 1968	3.46	76

a Maximum for period February to September 1966.
< Less than amount shown.

8-1451 Brady Creek tributary near Brady, Tex. (23)

Location.--Lat 31°05'05", long 99°17'33", McCulloch County, at culvert on Farm Road 734 and 4.3 miles southeast of Brady.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	May 20, 1967	4.14	218
1968	Jan. 20, 1968	3.51	140

8-1502 Llano River tributary near London, Tex. (07)

Location.--Lat 30°38'22", long 99°35'52", Kimble County, at culvert on U.S. Highway 377 and 2.7 miles south of London.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.3 miles; slope index, 168 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 28, 1966	a5.21	10
1967	July 20, 1967	5.49	21
1968	Jan. 20, 1968	5.38	<20

a Maximum for period February to September 1966.
< Less than amount shown.

8-1509 Stone Creek tributary near Art, Tex. (14)

Location.--Lat 30°44'17", long 99°03'29", Mason County, at culvert on State Highway 29, 3.2 miles east of Art, and 10.6 miles east of Mason.

Drainage area.--0.40 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.25 miles; slope index, 45.7 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 11, 1966	a3.88	45
1967	-	<2.98	<20
1968	May 11, 1968	4.66	82

a Maximum for period February to September 1966.
< Less than amount shown.

COLORADO RIVER BASIN

8-1513 Johnson Creek near Valley Spring, Tex. (14)

Location.--Lat 30°51'38", long 98°49'52", Llano County, at culvert on Farm Road 734, 0.8 mile west of Valley Spring, and 12 miles of Llano.

Drainage area.--5.66 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.72 miles; slope index, 68.8 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	May 20, 1967	3.22	190
1968	July 9, 1968	4.96	750

COLORADO RIVER BASIN

8-1527 Little Flatrock Creek near Marble Falls, Tex. (14)

Location.--Lat 30°30'52", long 98°18'44", Burnet County, at culvert on State Highway 71 and 4.8 miles southwest of Marble Falls.

Drainage area.--3.20 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 4.2 miles; slope index, 37.9 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	-	-	a0
1967	-	<4.80	<50
1968	Jan. 21, 1968	7.15	680

a No flow for period July to September 1966.
< Less than amount shown.

8-1528 Spring Creek near Fredericksburg, Tex. (14)

Location.--Lat 30°18'10", long 99°03'20", Gillespie County, on downstream side of bridge on U.S. Highway 290 and 11 miles west of Fredericksburg.

Drainage area.--15.2 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 6.15 miles; slope index, 43.8 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	May 21, 1967	3.38	110
1968	May 10, 1968	4.37	620

8-1531 Cane Branch at Stonewall, Tex. (14)

Location.--Lat 30°14'07", long 98°39'21", Gillespie County, at culvert on U.S. Highway 290 at Stonewall and 0.6 mile upstream from Pedernale River.

Drainage area.--1.37 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.35 miles; slope index, 59 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	-	a0
1966	Sept. 10, 1966	9.91	24
1967	Sept. 15, 1967	10.92	74
1968	July 13, 1968	11.78	135

a No flow for period August to September 1965.

8-1570 Waller Creek at 38th Street, Austin, Tex. (14)

Location.--Lat 30°17'49", long 97°43'36", Travis County, on right bank 200 ft upstream from bridge on East 38th Street at Austin, 1.1 miles upstream from West Branch of Waller Creek, and 3.3 miles upstream from Colorado River.

Drainage area.--2.31 sq mi.

Gage.--Recording. Datum of gage is 555.44 ft above mean sea level, datum of 1929, Fort Worth supplementary adjustment of 1942.

Topographic characteristics.--Length of main stream, 4.3 miles; slope index, 45.8 ft per mile. (Map scale, 1:24,000).

Remarks.--This station operated as research project for runoff from urban areas. Two standard and one recording rain gages located in watershed. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1956	May 1, 1956	3.94	a108
1957	May 26, 1957	5.75	596
1958	Oct. 14, 1957	5.54	518
1959	Sept. 23, 1959	5.41	468
1960	Oct. 4, 1959	4.67	251
1961	Oct. 29, 1960	7.77	1,970
1962	June 10, 1962	7.11	1,420
1963	June 18, 1963	4.72	263
1964	Sept. 27, 1964	7.01	1,340
1965	May 16, 1965	6.15	805
1966	Aug. 11, 1966	5.75	618
1967	Apr. 23, 1967	5.72	604
1968	Oct. 15, 1967	6.03	745

a Maximum for period Apr. 1 to Sept. 30, 1956.

8-1575 Waller Creek at 23d Street, Austin, Tex. (14)

Location.--Lat 30°17'08", long 97°44'01", Travis County, on San Jaci Boulevard, 50 ft upstream from bridge on East 23d Street at Austi and 2.1 miles upstream from Colorado River.

Drainage area.--4.13 sq mi.

Gage.--Recording. Datum of gage is 509.95 ft above mean sea level, datum of 1929, Fort Worth supplementary adjustment of 1942.

Topographic characteristics.--Length of main stream, 5.3 miles; slop index, 45.5 ft per mile. (Map scale, 1:24,000).

Remarks.--Three recording and three nonrecording rain gages located in watershed. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1951	June 12, 1951	-	a2,010
1954	Oct. 23, 1953	8.0	-
1955	May 18, 1955	b5.40	1,640
1956	May 1, 1956	3.90	615
1957	June 12, 1957	5.85	2,050
1958	Apr. 26, 1958	5.47	1,700
1959	Sept. 23, 1959	5.71	1,910
1960	Oct. 4, 1959	4.11	726
1961	Oct. 29, 1960	7.96	3,710
1962	June 3, 1962	6.40	2,270
1963	June 18, 1963	4.70	1,070
1964	Sept. 27, 1964	7.08	2,280
1965	May 16, 1965	7.12	2,320
1966	Aug. 11, 1966	6.25	1,680
1967	Apr. 23, 1967	4.96	900
1968	May 27, 1968	5.54	1,220

a Peak discharge determined by slope-area measurement half a mile downstream from gage.
b Maximum for period January to September 1955.

8-1589 Fox Branch near Oak Hill, Tex. (14)

Location.--Lat 30°14'00", long 97°52'25", Travis County, at culvert on State Highway 71, near intersection with U.S. Highway 290, 0.2 mile upstream from Williamson Creek, and 1.0 mile west of Oak Hill.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	-	a0
1966	Sept. 8, 1966	10.15	11
1967	Sept. 4, 1967	13.81	249
1968	Oct. 15, 1967	11.53	82

a No flow for period August to September 1965.

8-1591.5 Wilbarger Creek near Pflugerville, Tex. (14)

Location.--Lat 30°27'16", long 97°36'02", Travis County, on left bank 131 ft downstream from county road (Pfluger Lane), 800 ft downstream from Farm Road 685, 1.6 miles northeast of Pflugerville, and 1.9 miles downstream from Missouri-Kansas-Texas Railroad.

Drainage area.--4.61 sq mi.

Gage.--Water-stage recorder. Datum of gage is 670.61 ft above mean sea level, datum of 1929.

Remarks.--Three recording rain gages located in the watershed. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1964	June 16, 1964	6.92	1,760
1965	Feb. 16, 1965	4.75	737
1966	Apr. 24, 1966	3.67	396
1967	May 1, 1967	3.76	418
1968	Jan. 18, 1968	4.27	559

8-1594.5 Reeds Creek near Bastrop, Tex. (14)

Location.--Lat 30°00'26", long 97°15'03", Bastrop County, on downstream side of bridge on Farm Road 2571 and 8.3 miles southeast of Bastrop.

Drainage area.--5.31 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	May 11, 1965	-	4,000
1967	Sept. 21, 1967	3.28	600
1968	Jan. 22, 1968	4.16	1,060

8-1615.8 Dry Branch tributary near Altair, Tex. (13)

Location.--Lat 29°34'39", long 96°28'16", Colorado County, at culvert on State Highway 71 and 0.9 mile northwest of Altair.

Drainage area.--0.68 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.15 miles; slope index, 20 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	-	a<0.13	(+)
1967	Sept. 21, 1967	1.45	54
1968	June 23, 1968	2.27	188

a Maximum for period Aug. 10 to Sept. 30, 1966.
+ Discharge not determined.
< Less than amount shown.

8-1663 Turtle Creek tributary near Kerrville, Tex. (15)

Location.--Lat 29°58'11", long 99°11'02", Kerr County, at culvert on Farm Road 2771 and 5.9 miles south of Kerrville.

Drainage area.--0.46 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.02 miles; slope index, 191 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	May 22, 1966	a8.82	81
1967	Sept. 15, 1967	8.81	80
1968	Oct. 14, 1967	8.66	74

a Maximum for period Mar. 17 to Sept. 30, 1966.

276

8-1676 Rebecca Creek near Spring Branch, Tex. (15)

Location.--Lat 29°55'06", long 98°22'10", Comal County, on right bank 72 ft upstream from private road crossing, 2.9 miles upstream from mouth, and 3.7 miles northeast of Spring Branch.

Drainage area.--11.0 sq mi.

Gage.--Recording. Datum of gage is 985.55 ft above mean sea level, datum of 1929.

Topographic characteristics.--Length of main stream, 3.9 miles; slope index, 45.5 ft per mile. (Map scale, 1:24,000).

Historical data.--Maximum stage since at least 1885, 25-1/2 ft in September 1952, from information by local residents.

Remarks.--Rain gage at site.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1961	Oct. 29, 1960	6.18	4,340
1962	Apr. 27, 1962	2.12	3.8
1963	Apr. 5, 1963	6.20	4,340
1964	Mar. 18, 1964	2.99	ǂ249
1965	May 11, 1965	7.70	8,500
1966	Oct. 18, 1965	7.97	9,300
1967	Sept. 4, 1967	4.09	ǂ1,130
1968	Jan. 18, 1968	6.00	3,970

ǂ Revised.

8-1687.2 Trough Creek near New Braunfels, Tex. (15)

Location.--Lat 29°46'20", long 98°15'55", Comal County, at culvert on State Highway 46 and 11.0 miles northwest of New Braunfels.

Drainage area.--0.54 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.25 miles; slope index, 152 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	May 16, 1965	a10.0	386
1966	Dec. 2, 1965	8.59	236
1967	-	<6.47	<20
1968	Jan. 18, 1968	8.73	255

a Maximum for period Aug. 17 to Sept. 30, 1965.
< Less than amount shown.

8-1687.5 West Prong Dry Comal Creek tributary near New Braunfels, Tex. (15)

Location.--Lat 29°42'48", long 98°17'26", Comal County, at culvert on Farm Road 1863 and 10.3 miles west of New Braunfels.

Drainage area.--0.32 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.95 mile; slope index, 206 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	June 18, 1966	a6.37	<100
1967	-	<6.37	<100
1968	Jan. 18, 1968	6.71	140

a Maximum for period June 18 to Sept. 30, 1966.
< Less than amount shown.

279

8-1697.5 Walnut Branch at Seguin, Tex. (15)

Location.--Lat 29°34'47", long 97°58'46", Guadalupe County, at culvert on U.S. Highway 90 (West Kingsbury Street) at Seguin.

Drainage area.--5.46 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 4.75 miles; slope index, 14 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Sept. 21, 1967	6.08	1,030
1968	Jan. 19, 1968	5.60	780

8-1698.5 East Pecan Branch near Gonzales, Tex. (13)

Location.--Lat 29°29'58", long 97°31'36", Gonzales County, at culvert on U.S. Highway 90-A and 3.7 miles west of Gonzales.

Drainage area.--0.24 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.87 mile; slope index, 111 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	May 4, 1966	6.88	73
1967	Sept. 22, 1967	8.91	165
1968	June 23, 1968	6.02	<70

< Less than amount shown.

GUADALUPE RIVER BASIN

8-1721 West Elm Creek near Niederwald, Tex. (14)

Location.--Lat 29°59'04", long 97°44'39", Caldwell County, at culvert on Farm Road 2001 and 2.3 miles southwest of Niederwald.

Drainage area.--0.44 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.84 mile; slope index, 106 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Dec. 2, 1965	6.84	261
1967	Sept. 21, 1967	4.45	40
1968	Jan. 20, 1968	5.57	127

GUADALUPE RIVER BASIN

8-1762 Irish Creek near Cuero, Tex. (13)

Location.--Lat 29°08'02", long 97°12'10", DeWitt County, at bridge on Farm Road 1447 and 6.2 miles northeast of Cuero.

Drainage area.--15.5 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 6.8 miles; slope index, 15 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Sept. 21, 1967	7.86	4,650
1968	May 12, 1968	8.01	>4,650

> Greater than amount shown.

8-1766 Threemile Creek near Cuero, Tex. (13)

Location.--Lat 29°02'00", long 97°20'52", DeWitt County, at culvert on Farm Road 2718 and 5.2 miles southwest of Cuero.

Drainage area.--0.48 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.80 mile; slope index, 37 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	May 5, 1966	a6.62	22
1967	Sept. 21, 1967	11.71	1,140
1968	May 11, 1968	8.70	116

a Maximum for period Feb. 9 to Sept. 30, 1966.

8-1789 Bandera Creek tributary near Bandera, Tex. (15)

Location.--Lat 29°50'51", long 99°06'12", Bandera County, at culvert on Farm Road 689 and 10 miles north of Bandera.

Drainage area.--0.27 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.92 mile (revised); index, 244 ft (revised) per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 25, 1966	a6.29	(+)
1967	Sept. 15, 1967	6.38	(+)
1968	Oct. 15, 1967	6.98	(+)

a Maximum for period Mar. 16 to Sept. 30, 1966.
+ Discharge not determined.

8-1792 Medina River tributary near Pipe Creek, Tex. (15)

Location.--Lat 29°38'12", long 98°56'13", Bandera County, at culvert on Farm Road 1283 and 6.8 miles south of Pipe Creek.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 17, 1966	a4.12	<30
1967	Sept. 3, 1967	7.17	220
1968	Apr. 1, 1968	4.59	150

a Maximum for period Mar. 17 to Sept. 30, 1966.
< Less than amount shown.

8-1812 French Creek tributary near Helotes, Tex. (15)

Location.--Lat 29°33'43", long 98°39'26", Bexar County, at culvert on Farm Road 1604 and 2.2 miles east of Helotes.

Drainage area.--1.08 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.07 miles; slope index, 76.8 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 27, 1966	a5.91	107
1967	-	<5.89	<104
1968	Jan. 17, 1968	7.03	255

a Maximum for period Mar. 15 to Sept. 30, 1966.
< Less than amount shown.

GUADALUPE RIVER BASIN

8-1824 Calaveras Creek subwatershed No. 6 near Elmendorf, Tex. (15)

Location.--Lat 29°22'53", long 98°17'34", Bexar County, near center of dam on Chupaderas Creek, tributary to Calaveras Creek, 0.4 mile north of Sayer, 9.1 miles north of Elmendorf, and 9.2 miles upstream from mouth.

Drainage area.--7.01 sq mi.

Gage.--Recording. Datum of gage is 516.06 ft above mean sea level, datum of 1929 (levels by U.S. Soil Conservation Service).

Remarks.--Peak discharge based on maximum inflow (average for 5-minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. There are two recording rain gages, one at the station and one in the watershed. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1957	Sept. 25, 1957	3,750
1958	May 3, 1958	ǂ1,900
1959	Apr. 11, 1959	ǂ266
1960	Oct. 4, 1959	ǂ443
1961	June 18, 1961	ǂ827
1962	Nov. 13, 1961	385
1963	Apr. 4, 1963	13
1964	Feb. 3, 1964	1,810
1965	May 18, 1965	3,330
1966	Dec. 3, 1965	501
1967	Sept. 22, 1967	1,500
1968	Jan. 18, 1968	4,270

ǂ Revised on basis of 5-minute interval.

GUADALUPE RIVER BASIN

8-1870 Escondido Creek subwatershed No. 1 near Kenedy, Tex. (16)

Location.--Lat 28°46'41", long 97°53'41", Karnes County, near center of dam on unnamed fork of Panther Creek, 900 ft upstream from State Highway 72, and 3.9 miles southwest of Kenedy.

Drainage area.--3.29 sq mi.

Gage.--Recording. Datum of gage is 350.00 ft above mean sea level, datum of 1929 (levels by Soil Conservation Service).

Remarks.--Peaks are based on maximum inflow (average for 5 or 15-minute interval), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. No adjustment made for reservoir losses. There are two recording rain gages located in the watershed, one of which is at the station. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1955	Aug. 11, 1955	2,100
1956	June 19, 1956	486
1957	May 27, 1957	a1,800
1958	May 3, 1958	1,700
1959	Sept. 29, 1959	181
1960	July 17, 1960	a817
1961	Oct. 25, 1960	4,990
1962	June 1, 1962	745
1963	Nov. 27, 1962	1,300
1964	Aug. 8, 1964	809
1965	Jan. 21, 1965	1,550
1966	Oct. 18, 1965	157
1967	Sept. 21, 1967	2,910
1968	May 7, 1968	1,640

a Not adjusted for rainfall on water surface.

8-1879 Escondido Creek subwatershed No. 11 (Dry Escondido Creek) near Kenedy, Tex. (16)

Location.--Lat 28°51'39", long 97°50'39", Karnes County, near center of dam on Dry Escondido Creek, 0.5 mile upstream from bridge on Farm Road 792, 3 miles north of Kenedy, and 5.0 miles upstream from Escondido Creek.

Drainage area.--8.43 sq mi.

Gage.--Water-stage recorder. Datum of gage is 285.12 ft above mean sea level, datum of 1929.

Remarks.--Peak discharge based on maximum inflow (average for 5 or 15-minute intervals) computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. There are two recording rain gages located in the watershed, one of which is at the station. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1958	Sept. 22, 1958	1,540
1959	June 5, 1959	122
1960	Oct. 4, 1959	54
1961	Oct. 25, 1960	750
1962	June 2, 1962	722
1963	June 26, 1962	1,190
1964	Feb. 3, 1964	435
1965	May 19, 1965	4,950
1966	Sept. 17, 1966	334
1967	Sept. 21, 1967	8,030
1968	May 12, 1968	765

8-1884 Baugh Creek at Goliad, Tex. (16)

Location.--Lat 28°39'50", long 97°25'05", Goliad County, at culvert on U.S. Highway 59 and 1.5 miles west of Goliad.

Drainage area.--3.02 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.85 miles; slope index, 32 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 20, 1966	5.50	360
1967	Sept. 21, 1967	7.73	1,000
1968	Oct. 15, 1967	5.79	460

ARANSAS RIVER BASIN

8-1896 Olmos Creek tributary near Skidmore, Tex. (16)

Location.--Lat 28°15'27", long 97°44'15", Bee County, at culvert on Farm Road 797 and 3.4 miles west of Skidmore.

Drainage area.--0.58 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 25, 1966	a8.00	235
1967	Sept. 22, 1967	8.71	325
1968	May 11, 1968	9.01	>325

a Maximum for period Feb. 8, 1966, to Sept. 30, 1966.
> Greater than amount shown.

NUECES RIVER BASIN

8-1945.5 Plant Creek near Tilden, Tex. (15)

Location.--Lat 28°24'04", long 98°32'58", McMullen County, at culvert on State Highway 16 and 4.0 miles south of Tilden.

Drainage area.--0.36 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.66 mile; slope index, 77.6 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Nov. 11, 1965	7.30	32
1967	Sept. 22, 1967	10.06	220
1968	May 7, 1968	7.36	34

8-1989 East Elm Creek near Sabinal, Tex. (15)

Location.--Lat 29°18'36", long 99°23'50", Medina County, at bridge on U.S. Highway 90 and 4 miles east of Sabinal.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Sept. 3, 1967	a1.09	(+)
1968	Jan. 19, 1968	1.81	(+)

a Maximum for period Dec. 22, 1966, to Sept. 30, 1967.
+ Discharge not determined.

8-2009 Bone Creek near Hondo, Tex. (15)

Location.--Lat 29°33'16", long 99°06'12", Medina County, at culvert on Farm Road 689 and 14 miles north of Hondo.

Drainage area.--0.19 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.42 mile; slope index, 291 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 25, 1966	3.22	<10
1967	Sept. 22, 1967	3.97	29
1968	Jan. 19, 1968	3.49	15

< Less than amount shown.

NUECES RIVER BASIN

8-2035 Leona River tributary near Uvalde, Tex. (22)

Location.--Lat 29°17'30", long 99°45'31", Uvalde County, at culvert on U.S. Highway 83 and 5.2 miles north of Uvalde.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 13, 1966	a6.67	<20
1967	Apr. 13, 1967	6.69	<20
1968	-	<6.65	<20

a Maximum for period Feb. 3 to Sept. 30, 1966.
< Less than amount shown.

NUECES RIVER BASIN

8-2072 Rutledge Hollow Creek at Poteet, Tex. (15)

Location.--Lat 29°02'29", long 98°34'41", Atascosa County, at culvert on Farm Road 476 (School Road) at Poteet.

Drainage area.--18.3 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Sept. 22, 1967	8.69	1,800
1968	May 11, 1968	8.95	2,300

NUECES RIVER BASIN

8-2077 Lucas Creek near Pleasanton, Tex. (15)

Location.--Lat 29°00'52", long 98°22'47", Atascosa County, at bridge on State Highway 97 and 8 miles northeast of Pleasanton.

Drainage area.--32.8 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 10.7 miles; slope index, 13.6 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Sept. 22, 1967	12.97	2,970
1968	May 11, 1968	13.25	3,500

PETRONILLA CREEK BASIN

8-2115.5 Pintas Creek tributary near Banquette, Tex. (16)

Location.--Lat 27°42'36", long 97°49'57", Nueces County, at culvert on Farm Road 666 and 7.0 miles south of Banquette.

Drainage area.--3.28 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	May 5, 1966	a8.43	84
1967	Sept. 21, 1967	10.40	1,300
1968	July 11, 1968	8.07	37

a Maximum for period Mar. 8 to Sept. 30, 1966.

SAN FERNANDO CREEK BASIN

8-2116 Hamon Creek near Freer, Tex. (21)

Location.--Lat 27°46'28", long 98°34'13", Duval County, at culvert on State Highway 339 and 8.3 miles southeast of Freer.

Drainage area.--0.73 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Nov. 11, 1965	8.28	225
1967	Sept. 22, 1967	5.20	40
1968	Sept. 3, 1968	4.74	22

RIO GRANDE BASIN

8-3656 McKelligon Canyon at El Paso, Tex. (24)

Location.--Lat 31°49'20", long 106°28'15", El Paso County, on left bank 120 ft south of McKelligon Canyon Drive, 0.2 mile west of Alabama Avenue, 0.5 mile south of crest of Sugarloaf Mountain, 1.6 miles west of U.S. Highway 54, and 4.5 miles north of El Paso Post Office.

Drainage area.--2.3 sq mi, approximately.

Gage.--Recording. Altitude of gage is 4,257.33 ft above mean sea level (levels by city of El Paso).

Topographic characteristics.--Length of main stream, 3.2 miles; slope index, 440 ft per mile. (Map scale, 1:24,000).

Remarks.--No flow except Sept. 11, 12, 1958. Floodflow controlled by four small reservoirs upstream, with a total capacity of about 95 acre-feet.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
a1958	Sept. 11, 1958	-	76
1959			0
1960			0
1961			0
1962			0
1963			0
1964			0
1965			0
1966			0
1967			0
1968			0

a Period June to September 1958.

8-3658 Government Ditch at El Paso, Tex. (24)

Location.--Lat 31°47'02", long 106°26'04", El Paso County, at intersection of Montana and Houston Streets and 2 miles northeast of the business center of El Paso.

Drainage area.--6.4 sq mi, approximately.

Gage.--Recording. Altitude of gage is 3,740 ft (from topographic map).

Topographic characteristics.--Length of main stream, 3.5 miles; slope index, 106 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1958	Sept. 11, 1958	a2.64	550
1959	Aug. 5, 1959	.70	58
1960	July 14, 1960	.84	78
1961	Sept. 8, 1961	2.18	374
1962	Sept. 2, 1962	1.93	299
1963	Aug. 18, 1963	.66	53
1964	Sept. 11, 1964	2.06	338
1965	Sept. 6, 1965	1.44	179
1966	Sept. 23, 1966	2.03	329
1967	July 29, 1967	1.46	184
1968	July 6, 1968	2.13	359

a Maximum for period June to September 1958.

8-3702 Camp Rice Arroyo tributary near Fort Hancock, Tex. (24)

Location.--Lat 31°17'51", long 105°48'52", Hudspeth County, at culvert on Interstate Highway 10 and 1.6 miles east of Fort Hancock.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	June 27, 1966	a5.35	62
1967	Sept. 17, 1967	6.31	165
1968	Aug. 22, 1968	6.03	130

a Maximum for period April to September 1966.

8-3708 Wildhorse Creek tributary near Van Horn, Tex. (24)

Location.--Lat 31°02'55", long 104°40'12", Culberson County, at culvert on U.S. Highway 80 and 9.5 miles east of Van Horn.

Drainage area.--0.74 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.28 miles; slope index, 100 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 22, 1966	a5.38	190
1967	-	<4.37	<55
1968	-	<4.37	<55

a Maximum for period April to September 1966.
< Less than amount shown.

8-3776 Rio Grande tributary near Langtry, Tex. (22)

Location.--Lat 29°48'17", long 101°29'01", Val Verde County, at culvert on U.S. Highway 90 and 4.7 miles east of Langtry.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Sept. 9, 1966	a7.05	120
1967	-	<4.18	<20
1968	July 2, 1968	8.08	59

a Maximum for period January to September 1966.
< Less than amount shown.

8-4078 Delaware River tributary near Orla, Tex. (24)

Location.--Lat 31°55'46", long 104°28'52", Reeves County, at culvert on State Highway 652 and 36 miles west of Orla.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 21, 1966	11.52	1,700
1967	-	<3.11	<50
1968	-	<3.11	<50

< Less than amount shown.

8-4368 Courtney Creek tributary near Fort Stockton, Tex. (06)

Location.--Lat 31°00'28", long 103°04'20", Pecos County, at culvert on Farm Road 1776, 0.2 mile north of U.S. Highway 285, and 14 miles northwest of Fort Stockton.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	June 12, 1966	a2.82	45
1967	June 14, 1967	2.49	31
1968	Aug. 30, 1968	2.79	44

a Maximum for period January to September 1966.

RIO GRANDE BASIN

8-4375.5 Lake Leon tributary near Fort Stockton, Tex. (06)

Location.--Lat 30°54'04", long 103°02'50", Pecos County, at culvert on U.S. Highway 290 and 10 miles west of Fort Stockton.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 24, 1966	a7.25	740
1967	May 29, 1967	8.01	980
1968	Aug. 30, 1968	6.27	360

a Maximum for period January to September 1966.

RIO GRANDE BASIN

8-4376.5 Monument Draw tributary at Pyote, Tex. (06)

Location.--Lat 31°33'33", long 103°07'43", Ward County, at culvert on Spur 247 and 2.1 miles northwest of Pyote.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	July 12, 1966	a3.22	30
1967	July 20, 1967	1.71	5.5
1968	Sept. 22, 1968	3.10	27

a Maximum for period January to September 1966.

RIO GRANDE BASIN

8-4444 Three Mile Mesa Creek near Fort Stockton, Tex. (06)

Location.--Lat 30°50'16", long 102°50'26", Pecos County, at culvert on State Highway 285 and 4.6 miles southeast of Fort Stockton.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	June 10, 1965	a2.84	76
1966	Apr. 24, 1966	2.71	69
1967	May 29, 1967	2.43	45
1968	Sept. 21, 1968	2.88	84

a Maximum for period June to September 1965.

RIO GRANDE BASIN

8-4472 Howards Creek tributary near Ozona, Tex. (07)

Location.--Lat 30°41'18", long 101°20'51", Crockett County, at culvert on U.S. Highway 290 and 8.7 miles west of Ozona.

Drainage area.--7.53 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 7.75 miles; slope index, 39.6 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	June 13, 1967	a4.20	<200
1968	May 11, 1968	3.32	<200

a Maximum for period Jan. 11 to Sept. 30, 1967.
< Less than amount shown.

8-4488 Sonora Field Creek at Sonora, Tex. (07)

Location.--Lat 30°34'40", long 100°38'54", Sutton County, at culvert on U.S. Highway 277 at Sonora.

Drainage area.--2.60 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.4 miles; slope index, 54.2 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	a2.39	<50
1966	May 29, 1966	5.44	510
1967	Apr. 17, 1967	3.72	96
1968	May 10, 1968	5.07	410

a Maximum for period June to September 1965.
< Less than amount shown.

8-4494.7 Rough Canyon tributary near Del Rio, Tex. (22)

Location.--Lat 29°35'50", long 100°51'51", Val Verde County, at culvert on U.S. Highway 277 and 16 miles north of Del Rio.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Sept. 2, 1967	6.80	710
1968	Apr. 18, 1968	5.80	240

8-4496 Evans Creek tributary near Del Rio, Tex. (22)

Location.--Lat 29°33'00", long 101°04'58", Val Verde County, at culvert on U.S. Highway 90 and 16 miles northwest of Del Rio.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 25, 1966	a3.49	48
1967	Oct. 5, 1966	2.81	17
1968	June 17, 1968	3.95	78

a Maximum for period January to September 1966.

8-4531 Zorro Creek near Del Rio, Tex. (22)

Location.--Lat 29°19'52", long 100°49'54", Val Verde County, at culvert on U.S. Highway 277 and 4.7 miles southeast of Del Rio.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 24, 1966	a9.53	800
1967	Sept. 17, 1967	<7.28	<100
1968	-	<7.28	<100

a Maximum for period Feb. 2 to Sept. 30, 1966.
< Less than amount shown.

8-4549 East Perdido Creek near Brackettville, Tex. (22)

Location.--Lat 29°20'50", long 100°34'32", Kinney County, at culvert on U.S. Highway 90 and 9.7 miles northwest of Brackettville.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 24, 1966	6.84	200
1967	-	<5.29	<30
1968	-	<5.29	<30

< Less than amount shown.

8-4596 Arroyo San Bartolo at Zapata, Tex. (21)

Location.--Lat 26°55'39", long 99°17'20", Zapata County, at culvert on U.S. Highway 83 and 1.0 mile north of Zapata.

Drainage area.--0.61 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 14, 1966	a5.64	550
1967	May 16, 1967	10.9	570
1968	Apr. 29, 1968	2.40	118

a Maximum for period Feb. 17 to Sept. 30, 1966.

8-4661 Rio Grande tributary near Rio Grande City, Tex. (21)

Location.--Lat 26°18'58", long 98°39'45", Starr County, at culvert on U.S. Highway 83 and 10.7 miles southeast of Rio Grande City.

Drainage area (revised).--1.20 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.23 miles; slope index, 62.4 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	June 19, 1966	a4.61	100
1967	Sept. 22, 1967	4.79	125
1968	-	<3.99	<50

a Maximum for period Feb. 16 to Sept. 30, 1966.
< Less than amount shown.

8-4662 Rio Grande tributary near Sullivan City, Tex. (21)

Location.--Lat 26°17'12", long 98°35'16", Starr County, at culvert on U.S. Highway 83 and 1.6 miles northwest of Sullivan City.

Drainage area (revised).--0.40 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.4 miles; slope index, 39.4 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

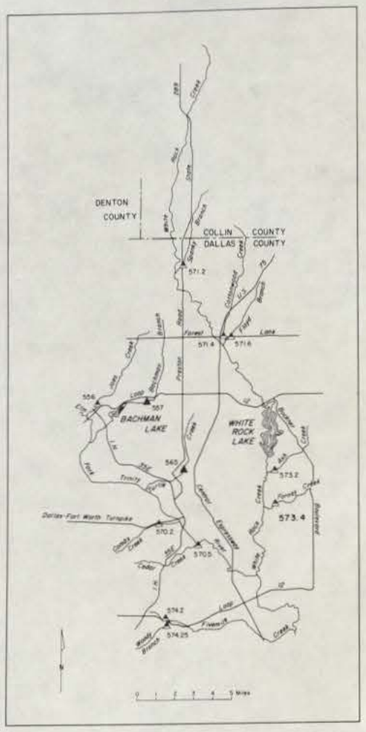
Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 19, 1966	a6.63	20
1967	Aug. 24, 1967	7.42	47
1968	June 19, 1968	6.69	22

a Maximum for period Feb. 16 to Sept. 30, 1966.

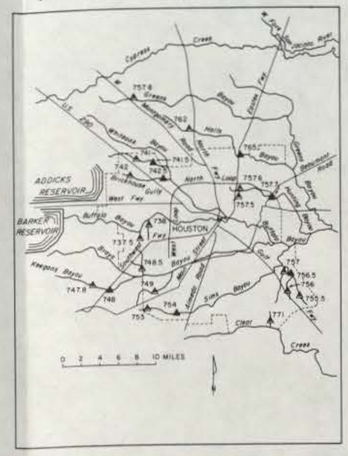
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH THE TEXAS HIGHWAY DEPARTMENT AND U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION

WATER RESOURCES DIVISION
TEXAS DISTRICT



Inset A



See inset B

NEW MEXICO

OKLAHOMA

ARKANSAS

LOUISIANA

Inset A

Inset B

MEXICO

GULF OF MEXICO

EXPLANATION

7-2999.4▲ Stream-gaging or reservoir-content station

8-908.5△ Crest-stage partial-record station

Number indicates permanent station number. Prefix 7 is used in Red and Arkansas River Basins; 8 is used in other basins. (Prefixes omitted on map)

9 Texas Highway District

Base compiled, with some modification, from River Basin Maps, IACWR, Subcommittee on Hydrology. (1949 ed.)

Plate I

Map showing gaging stations on small streams in Texas, October 1, 1968

50 0 50 100 MILES